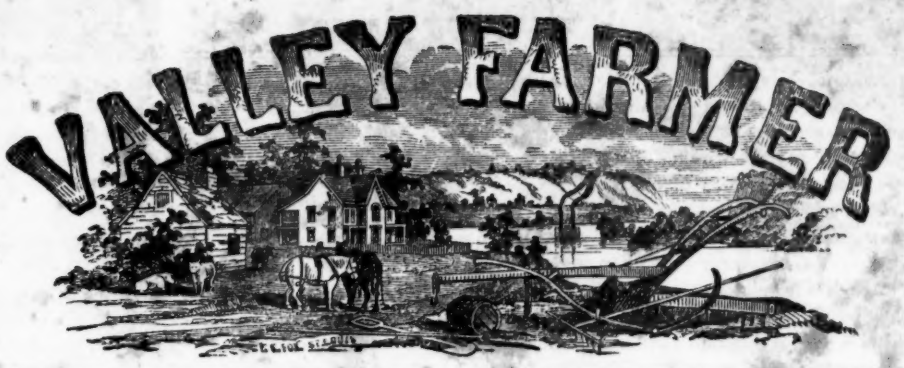

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THE TRUE SYSTEM OF FARMING.

There are many men who profess to be good practical farmers who seem to possess but little knowledge of the true system of agriculture. A man may plow, plant and cultivate well, and raise large crops, and yet be ignorant of the correct system of farming. There is no country on the globe where there is such a reckless disregard of the fatal consequences of improper and over cropping as that practiced by a large portion of the farmers of the United States.—Nor is this state of things much to be wondered at. When our forefathers first landed upon these shores they found a new, unbroken soil, possessing all the natural elements of fertility in the greatest profusion, which for a series of years continued to yield adequate returns for the wants of the inhabitants. And although the population has increased to thirty millions in a period of a little over two hundred years, there yet remains a supply of land unbroken and unoccupied; so that many of the farmers of the country instead of practicing that system of farming which would give the most profitable return in the crops harvested and add perpetual fertility to the soil, wore out the land in the shortest possible period and took up new tracts upon which to continue the same ruinous course; and while new lands were thus easily acquired, no care or labor was bestowed to retain the fertility of the generous soil. In the more Northern and Eastern States, as well as in the tobacco and cotton States of the South, this system was also practiced, but with some different results, arising from the different character of the crops grown. In the former a "mixed husbandry" is pursued, that is, crops embracing wheat, rye, oats, barley and Indian corn, together with potatoes and other root crops. The changing or rotation of these crops, including grass for pasturage and hay, gave the land a degree of rest, and this rotation of crops made more equal drafts upon the various constituents of the soil than is the case when the cultivation is confined to a less variety of crops; and, hence, although a large portion of the lands of these States have long since parted in a great degree with their original elements of fertility and rendered excessive and costly manuring necessary, yet it has required a longer period to reduce the soil to its present condition than it has in the "planting" States of the South where the crops are confined chiefly to tobacco and cotton. In the oldest of these States—Maryland, Virginia, and the Carolinas—a large proportion of the lands have long since been so reduced that they have hardly paid the cost of cultivation, and, consequently, in later years a very expensive system of manuring has become absolutely necessary.—The ordinary modes of manuring practiced in the Northern States, viz. yard and stable ma-

nure, not being available under the Southern system of farming, guano and other concentrated manures are imported to a large amount annually as the only available means of rendering their cultivation at all remunerative. In the more northern of these planting States the introduction of these foreign manures has wrought a wonderful revolution in the amount of their agricultural returns. And yet no less marked have been the results in the Northern States by the system of manuring that has become absolutely necessary. Besides the application of large quantities of guano, ground bones, and super-phosphates, together with the ordinary supply of yard and stable manure, the muck beds, and peat bogs, which so largely abound there, have been resorted to as sources of immense wealth as store-houses of manure.

The money now expended in the United States for guano and other concentrated manures, amounts to several millions of dollars annually. And in Great Britain, where the soil has been for hundreds of years subject to a similar ruinous system of cropping, hundreds of millions of dollars are annually expended for similar purposes. According to the estimates of Liebig and others well informed on the subject, all the guano deposits, at the present rate of demand, will be entirely exhausted in the course of the next twenty-five or thirty years. Then, by what means the exhausted energies of the soil are to be restored we are at a loss to conjecture. Millions of acres of these worn-out lands, both in the North and in the South have been abandoned by their original proprietors for new lands in the Far West, and their improvement and restoration left to the skill and enterprise of a more intelligent and scientific class of farmers. While these are engaged in the labor of improving these old lands, many of the original settlers are in the newer States pursuing the same improvident course that has rendered it necessary for them to abandon their homes and to endure the hardships and privations upon the borders of civilization.

By pursuing a proper system of farming, the original fertility of most lands may not only be maintained, but the soil may be improved, and without resort to other sources than the farm for manure. Practice will prove that a less number of acres, well and thoroughly cultivated, will yield larger crops than more when but half tilled. The number of acres devoted to exhausting crops must be reduced and in their stead one-fifth, more or less, put in meadow and pasturage and in green crops to be turned under as a means of renovating the soil, adding to the plowed land annually all the manure that can be made by husbanding all the refuse of the farm and employing it to the best advantage. Pursuing a system embracing this or a similar plan as a basis of operation, there are few farms, not already exhausted, but may be kept rich and fertile to an indefinite period.

The forthcoming returns of the late census will show many interesting facts to those engaged in agricultural pursuits. The increased returns in the various crops in some sections of the country, under the improved system of farming which necessity has enforced, and the diminution per acre in other parts of the country where a less provident course has been pursued; the extent of increase, and occupation of new lands: will afford data for numerous interesting calculations.

Under the present ratio of increase of population and settlement of the new lands, the period is not far distant when all the new lands most desirable for the general objects of agriculture will be taken up, and at that period, too, the annual increase of population will be astonishingly multiplied, and the only means to supply them with farms will be by the subdivision of lands already occupied. It is of the utmost importance, then, that a system of the most improved farming be adopted in order, as far as possible, not only to preserve the natural fertility of the soil, but to improve it to the greatest possible extent.

It is a well known fact to all intelligent farmers that that system of cultivation which tends to increased fertility, though attended with some additional cost, is the most profitable.

The true policy of all capitalists is to maintain their capital unimpaired. An annual draft upon this will, sooner or later, result in bankruptcy. The soil of the farm is the farmer's stock in trade, his capital in bank. To pursue a system of farming that annually draws from the soil a certain per centage of its natural fertility beyond that which is restored to it in some form of manuring, is like sinking so much cash capital. While a farmer acquires wealth from the immediate returns from his lands, the ratio of increase may be constantly augmented by bestowing the proper care upon the soil and rendering this annually more valuable. There is one draft upon the soil of our great Western farms that is too apt to be lost sight of. It is upon these that the great cities and manufacturing towns of the East as well as of the West depend for the means of subsistence, and the im-

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mense railroad trains that are continually engaged in transporting to market the great crops of the West carry with them the life of the soil that produced them, and bring nothing in return to restore the waste occasioned thereby. This continual drain of the cities has long since rendered desolate the lands in older countries, and the same results are as sure to follow in this, unless that system of farming is pursued which alone can preserve the vitality of the soil unimpaired.

Draining With the Mole Plow.

The most satisfactory experiment in draining with the Mole Plow that we hear any account of, is given by Mr. J. M. Trimble, of Illinois. The farm upon which this trial was made, contains 1,700 acres of prairie land, four-fifths of which requires under-draining. On account of the greater cost of tile draining, the owner concluded to try the mole plow. The quantity of land drained was 230 acres, and was finished in the fall of 1858. Through the tract was a creek, with but little fall, and the land low and varying but little from the level. At the time the plow was run, the water stood upon the land from one to six inches deep. Mr. Trimble describes his mode of operation as follows:

"I laid out open ditches from the creek west, staking them off at sixty rods, and marking the depth of cut and width of ditch on each stake. In this I laid off 680 rods of open ditch, at 80 rods apart, varying in depth from four to six feet, and in width from six to eight feet, allowing for slope of banks one and three-fourths feet to one foot in hight, which was let by contract at 65 cents per rod. The under-drains were made with the plow, requiring two yoke of cattle and two men, who opened 1,500 rods of under-drain in sixteen days, at a depth of three feet four inches, and at a cost of $65."

The distance apart at which the mole was run, intersecting with the open ditches, is not given. This land was well broken up and planted to corn, which was up at the time of the severe frost which occurred on the fifth of June. The day following the land was again plowed, and replanting commenced until 200 acres were replanted. This was worked during the season four times with the double and single shovel plows. The 30 acres that were last planted were not cultivated in any way. From the 23d of May to September 10th the whole amount of rain that fell did not exceed half an inch. The entire crop was harvested by cutting up and shocking. It is now estimated that the 200 acres gave a yield of 60 bushels per acre; and the 30 acres not cultivated gave 40 bushels per acre. Mr. T. says:

"I have been on the farm from the 3d to the 25th of November, during which time we have had several hard rains; and I examined the out-lets of all the under drains, which, without a single exception, are passing off large quantities of water. From a close observation I am quite satisfied that the under-drains were quite as important to the growing crop during the drought, from May to September, as they were in carrying off the surplus water in the spring; and I am equally certain that the increase of crop, resulting from draining, is all of 20 bushels per acre, which would make the account stand thus: Six hundred and eighty-five rods of open ditch, at 65 cents per rod, $445.25. One thousand five hundred rods of under-drain cost $65. Use of machine, wear and tear, $25.75. Entire cost $536. Cr. by twenty bushels of corn, on two hundred and thirty acres, gives four thousand six hundred bushels of corn, at 25 cents, $1,150; showing a profit of $626 in favor of the mole plow, in a single year."

We give this statement, knowing that there are millions of acres of similar land that may be treated in the same way, with similar and probably better results.

We should not omit to mention the character of the soil of this piece of prairie, for upon this depends the success of this method of draining. The surface soil is represented as being of black clay or loam, rather compact and tenacious, one to two and a half feet in depth; the sub-soil is a *close, compact* yellow *clay*, to the depth of from three to five feet.

Land of less tenacious character will probably require tile to keep the drains open; these cost so much in the newer portions of the country that they will be more slow in coming into general use, but there are many thousands of acres of flat land, with clay sub-soil that may be drained with the mole plow at so small a cost that it may be employed profitably in any section of country that requires draining. Much of the land drained in this way will, most likely, after a few years, require to have the drains reopened, yet the extra product in a single crop will often pay all the cost, and as in the instance cited above leave a handsome profit besides. Where the soil is of that character that the drains are liable to fill up soon, enough will be learned in regard to the advantages of the system of drainage as to lead the proprietors of such land to finally adopt the more permanent, yet more expensive method of using tile. But in the mean time we earnestly urge the adoption of drainage with the mole plow on all land adapted to its use.

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THE ART OF AGRICULTURE.

The *Scientific American* says:

"A great deal has been written and said about the science and art of agriculture, but for practical guidance the whole thing is in a nutshell. It consists in these two rules—make the land rich, and keep the weeds down. If any person who tries to raise any plant will follow these two rules he will succeed, and if he does not follow them he will not succeed."

The *Scientific American* is generally good authority in all matters relating to the arts and sciences, but its present view in regard to the art and science of Agriculture we consider falls far short of the mark.

There is a large proportion of land in almost all countries, that, in addition to manure (that is, the ordinary fertilizers), requires its constituents entirely changed. If light and sandy, by the addition of clay or heavy loam; and, on the other hand, a heavy clay soil requires an addition of sand in order to render it sufficiently light and porous for farm crops. In the older countries of Europe the character of the soil is modified to a great extent in this way. Again; How many thousands of acres of land there are that is almost worthless for cultivation in its natural condition, but rendered extremely productive by a system of thorough draining; and to introduce and apply this system in the most perfect manner requires the exercise of both science and art. Then again, there are immense tracts of country possessing all the natural elements of fertility where rains seldom fall, or, if rain occurs it is generally in winter, and the deficiency of moisture is supplied by artificial means involving no small degree of skill and science; and these, too, are called in to the aid of the most successful farmers in carrying out a perfect system of rotation—different soils, locations and markets requiring some modification in order to insure the most profitable returns, and to maintain and add to the fertility of the soil. All these require some knowledge of the sciences as well as of art beyond the mere routine of applying manure and killing weeds.

IMPROVEMENT IN WHEAT GROWING.—In New England, and in some other portions of the older States, wheat for many years past has been but little cultivated, and for the best of all reasons—the land refused to produce it. But wheat once flourished upon these lands, and it would seem that intelligent farmers should be able to ascertain the cause of failure and apply the remedy. Undoubtedly some one or more of the essential ingredients for the growth of this crop, once abundant in the soil, have been exhausted, and require to be restored. England was an old country while those portions of our country to which we allude was a wilderness, known only to the Red man; yet the yield of wheat per acre in England now is greater than it has ever been in the best portions of this country, which are unsurpassed in the original elements of fertility. These facts imply that Agriculture is a science, and that the American farmer is not so well versed in a knowledge of his important calling as he should be. It is, however, an interesting fact that some of our farmers begin to realize these truths, and already begin to reap the reward for their intelligence and industry.

A late number of the *New England Farmer* says: "The attention called to this crop (wheat) during the winters of 1858 and 1859, through the agency of Farmers' Clubs, has resulted in producing, we think, twice or three times the usual amount of wheat harvested in any one of many preceding years. The crop is also of excellent quality. We are informed that in some towns in Cheshire county, N. H. enough has been raised to supply the wants of the inhabitants. This increase of one of the staple articles of food may be fairly credited to the *dissemination of books and news papers devoted to agriculture, and to the discussions that have been held among the people in relation to farming matters.*"

LAW AND ORDER AT FAIRS.

In order to maintain the usefulness of the agricultural fairs, which have now become established institutions throughout the country, their character for respectability must be sustained; and in order to do this, law and order must be enforced. It is a well known fact that at all large gatherings of people, on whatever occasion, there is a horde of lawless persons ready to join the multitude, among whom are pickpockets, gamblers and black-legs, skilled in their various arts for "obtaining money under false pretenses," as well as rowdies and drunkards. At some of the larger fairs a police force is upon the ground. But the most efficient means that we have seen employed as "a terror to evil doers," was the presence of a justice of the peace holding forth in his office upon the ground during the entire fair of the New York State Agricultural Society, held last fall at Elmira, where pickpockets, drunkards, and all other violators of the public peace met with arrest and speedy trial and imprisonment, keeping them beyond the power of doing further harm, at least during the progress of the fair.

This we conceive to be an admirable plan and worthy to be adopted on every fair ground.

Once let it be known that all the appliances are upon the spot and in working order to bring rogues to speedy justice, and the most of them will seek other fields in which to practice their black arts. Among the ordinary buildings upon the fair grounds should be "Police" and "Justices' Offices," inscribed in prominent letters, and after a few prompt arrests and trials the rogues will find that such are no places for them.

The following report from the Judge who held Court at the New York State Fair will show the wisdom of the measure. The Judge says:

"Having performed the duties of magistrate during the days of October 1st, 2nd, 3d, 4th, and 5th on the Fair Grounds of the New York State Agricultural Society, in Elmira, there were brought before me *forty-three persons* charged with various violations of the regulations of the Society; and fines were imposed by me against said persons, to the amount of *sixty-one dollars*. One fine of three dollars, prisoner sent to jail in default of payment; and fines to the amount of twelve dollars were remitted by me and the Executive Committee—leaving forty-six dollars paid to the Treasurer of the Society

"During the above days fourteen persons were brought before me at a Court of Special Sessions, and fines imposed to the amount of *forty dollars* and seventy-five cents; which fines were paid, and belonged to the County of Chemung. In the discharge of my duties, I was greatly aided by Schuyler Hubbard, Esq., General Superintendent of Police of Oneida County, and aided by his efficient assistants from the cities of Albany, Utica and Buffalo, and the police employed by the Society in this place. I found them at all times gentlemanly, and willing to perform the duties assigned to them; and great credit is due to the several gate-keepers of the Society, for their promptness in the discharge of their duties."

METALLIC THERMOMETERS.—Of all the meteorological instruments now in use, the Thermometer is the most common; besides those required by various manufacturers, most farmers and housekeepers have one or more about the premises. One is usually required as an indicator of the external temperature, and is watched with exceeding interest at both the extremes of heat and cold; at which times the subject furnishes a popular topic for telegraphic communications to the various portions of the country, enabling us to compare the degrees of change in the temperature of remote places with those we chance to occupy.

But, aside from thermometers kept for the purpose intimated above, they are considered indispensable in our dwellings, many of which are now heated in winter, by the various forms of hot-air furnaces, and the temperature of the various apartments can only be regulated by the use of the thermometer. The ordinary kind in use has heretofore been the simple glass tube filled either with mercury or colored alcohol, but generally mercury. The column of mercury is so minute, and corresponds so nearly in shade with the glass, and the metalic scale of the instrument, as to render it difficult to observe the exact hight of the mercury. This difficulty has recently been obviated by the invention of a "Metallic Thermometer" having a round face four inches in diameter, with an index hand moving upon an arc of the circle, which is divided into degrees corresponding with the scale of the ordinary mercurial thermometer. These little instruments not only render the degree of temperature very distinct, but they are withal very ornamental. This form of thermometer was invented by Victor Beaumont, Esq., the inventor of the cheap borometer described in the *Valley Farmer* some months ago, and corresponds in size and appearance with it, except the thermometer is of less thickness than the barometer. They are manufactured by the inventor at 175 Center street, New York. We recently called at the establishment and spent some time in witnessing the process of the manufacture of the different parts and the manner of adjusting the instrument to correspond with the degrees of temperature, and it is surprising to see how nearly a large number of them correspond with each other, and with the standard of the mercurial thermometer.

HOW TO TRAP GOPHERS.

EDS. VALLEY FARMER:—I used to be of the opinion that people knew how to catch the gopher if they desired to do so, and that those people who had their fields overrun with this pest were either too lazy or thought that the gopher did no harm; but finding myself mistaken I will give you my way of catching them, which I have practiced for many years, and exterminated them from a 35 acre farm, and have only occasionally to set my trap for some emigrant from a neighbor's farm.

All that is required, is a common steel rat trap, a spade, and a board about 18 inches square. Dig a hole about a foot square between two of the gopher's mounds or just inside the outside one, so that you strike the gopher's hole, which a little experience will enable you to find with ease. Dig your hole an inch deeper than

the bottom of the gopher's, set your trap facing one of the holes and cover it with fine dirt so that he cannot see the trap, then put in a small piece of sweet potato, horse radish, or a few grains of corn; cover the hole with the board, and throw some earth around the edges so as to perfectly exclude the light, for if this is not done, the gopher will simply close up the hole you have opened, but if all is dark he will go into the hole to see what is the matter. It is not necessary to put anything in the hole, but it is better to do so, for it will often tempt him to go into the trap when otherwise he would not.

This work can be done by the boys, who will find it good sport, besides keeping them employed; and it would not be a bad idea I think to pay them a trifle per head for the gophers they catch, and let them earn a little pocket money, which is much better than giving them money in any other way; the boys will feel much better to know that the money they spend was earned, and it will teach them the value of money and give them habits of industry. C. A. RIEHL.

Boonville, Mo. Dec. 1st, 1860.

DRAIN AND WATER PIPES.

Various methods are employed for the construction of water pipes, for conveying water from reservoirs and springs to factories, barn-yards and dwellings. The most common plan has been to lay logs bored out and secured tightly together at the joints; but these are liable to rot and get out of order and to leak, causing trouble when it is least expected, and often when it is most inconvenient to repair. Iron and lead are also used, which besides being expensive, the former is objectionable on account of its liability to become stopped up by corrosion; and the latter on account of the poisonous properties of the oxide formed by the action of the water upon the lead.

When small streams of water are to be conveyed, it is sometimes done by forming a continuous pipe of cement or water lime. This is done by using a small wooden rod as a former or core, around which the cement is laid with a mason's trowel, pulling the rod forward as the cement hardens or sets; but in forming any but the smallest pipe a difficulty is experienced on account of the tendency of the cement to adhere so closely to the rod as to render it difficult, and sometimes impossible, to draw it forward. This difficulty has suggested an improved method, one that promises to be of great practical utility, not only for forming pipes of all sizes, from one inch to a foot or more in diameter, but for making drain pipes for under-draining land, as a substitute for the common drain tile. This invention is known as Pilgrim's Patent Inflated core. This "core" is made of India-rubber in the form of a long bag, closed at one end and having a stop-cock at the other. This is blown up so as to support the weight of the mortar, and as soon as it becomes hardened, which is in a few minutes, the wind is let out and the bag hauled forward and again inflated ready for forming another length, and so on as fast as desired.

Having been called upon to suggest some feasible plan to conduct a large body of water that settles in a public street, on the occurrence of every considerable rain, and having seen a favorable notice of the invention alluded to, we wrote to the proprietor and made arrangements to procure a number of these patent cores, and at once gave the necessary directions to the workmen to proceed with the formation of the pipe. The ditch was excavated and the bottom covered to the proper width with cement prepared in the ordinary way for making cisterns and adding about two parts of coarse, sharp sand to one of cement; upon this bottom was laid two of the inflated cores, seven inches in diameter and twenty feet long, leaving a space of half an inch between them, and covering both pipes or cores one-and-a-half inches with the cement, and filling the space between them, thus joining two separate continuous pipes.

This makes a most excellent pipe, remarkably smooth on the inside, and free from the objections of wood, iron or lead, and vastly cheaper than any of the other forms of earthen pipes. For gas pipes, springs, cisterns, sesspools, or for any other purpose where it is desired to convey water, we know of nothing to compare with this method, either for economy or durability. The work can be done on the spot by any practical workman accustomed to handling mortar. For a medium size pipe for conveying water from springs to dwellings, barn-yards, &c., one barrel of cement, properly mixed, will make ten rods of pipe. The cost of the cement varys in different markets from $1.25 to $2.00 per barrel.

For land draining, as a substitute for the ordinary earthen tile, it answers an excellent purpose, enabling every farmer to make his own pipe without incurring the expense of a tile machine, and the trouble of burning the tile. In making drain tile the pipe is formed immediately upon the bottom of the ditch in the form

of the ordinary horse-shoe tile, that is, open at the bottom. As land draining is now commanding general attention among farmers, this invention will afford additional facilities for the purpose; as well as for water pipes, required for the various uses of farmers, manufacturers, &c. Mr. Henry Pember, of New Britain, Connecticut is the proprietor of the patent, to whom letters may be addressed.

Utility of Lightning Rods.

The nature of electricity and the office of lightning rods are not clearly understood by many, and some writers, of late, we notice, are attempting to show that there is no real security from having our dwellings and barns surrounded with conductors, because they so frequently hear of instances of buildings being struck that are furnished with rods. These accidents are totally due to the inefficiency or imperfection of the rods, and in what particulars, we have before, more than once, explained to our readers.

In a late number of the *Scientific American*, a number of interesting facts are furnished by a correspondent going to show the protection afforded by properly appointed lightning conductors on buildings as well as on ships at sea.

It is now 107 years since Dr. Franklin first discovered the use of lightning rods. Previous to this, the writer shows that church spires were frequently struck with lightning and often severely damaged. One church in Venice (St. Mark's) was struck as many as *nine times;* but since the application of rods to these spires—one hundred years ago—they have stood unharmed! There is just as much lightning as ever, and the number of churches is greatly increased.

He further states that from 1799 to 1815—sixteen years—there were 150 vessels in the British Navy struck by lightning, upwards of 70 men killed, and 133 others wounded. The loss of material, only, amounted to over *one and a half millions.* In 1821, Sir W. Snow Harris, F. R. S. proposed a system of copper conductors, which were applied to vessels of the navy; *now* (after nearly forty years trial) it is found that losses and damage by lightning in the navy have *ceased* almost entirely, although the number of vessels have been increased very materially.

Of the number of accidents we occasionally hear, in houses being struck by lightning that have conductors on them, probably all of them are the result of defects in the many worthless patents that are hawked about the country by itinerant venders. There is no real improvement patented in lightning conductors. The old rod proposed in the days of Dr. Franklin is all that is necessary to insure safety.

While on the subject we will allude to a very common error entertained by many people of the present day in regard to the tendency of iron and steel to attract lightning. Many fear to wear the ordinary steel hoop skirts during a thunder storm, and we saw one lady very unceremoniously disrobe herself at a public exhibition, in time of a severe thunder storm.

The property of metal is only to *conduct* not to *attract* the electric fluid.

CORK OAK—QUERECUS SUBER.

It will be remembered by those who have read the Patent Office Report of last year, that the agricultural branch of that department of the Government has secured a quantity of the acorns of the Cork Oak for distribution in the Southern States of the Union for cultivation. As the soil and climate of a considerable portion of the United States is as well adapted to the growth of this valuable tree as its native soil, we have thought the subject of sufficient importance to give a brief description of this tree and of the manner of obtaining the Cork of Commerce.

Michaux, in his admirable work on the Forest Trees of the United States, Canada and Nova Scotia, describes the Cork Oak, and recommends its cultivation in our country, and thought it had great advantages over several other trees which would likewise flourish in the same parts of the United States, such as the Olive and the White Mulberry. To fit these products for consumption, particularly that of the Mulberry, requires complicated processes, which can be performed only in populous countries; while on the contrary, the bark of the Cork Oak might be transported to the cities, where it is always manufactured from the imported production, or it could be made into corks on the spot where it grew by a simple operation performed by a single person with implements of which the price does not exceed two or three dollars. He says:

"Both public and private interest requires the inhabitants of the Southern Coast, and especially the neighboring islands, to rear the Cork Oak about their plantations and in places that are unfit for the cultivation of cotton. It should be introduced into West Tennessee, and with the more reason as the vine may be cultivated there with success."

Thus wrote this distinguished arboriculturist fifty years ago, and, according to his prediction, the vine has not only been successfully introduced into Tennessee, but into many other States in the Union where the Cork Oak will flourish equally well. Indeed, it will flourish in any climate where the Mulberry and Olive will grow.

The native country of the Cork Oak is the southern parts of France, in Spain, Portugal, Italy, and the States of Barbary, which are comprised between latitude 44° and 35°. It rarely exceeds forty feet in hight, and three feet in diameter. Its leaves are evergreen, but the greater part of them fall and are renewed in the spring. The wood is hard, compact and heavy, but less valuable than that of the common European Oak. But the bark supplies a material for which nothing else known in nature can be substituted. The first growth is of but little value; in ten years it is renewed; this is hardly thick enough for corks, but is chiefly used by fishermen to buoy up their nets. The next crop of bark possesses the qualities requisite for good corks; from this period it is collected once in eight or ten years. Its thickness is owing to the extraordinary swelling of the cellular tissues

July or August are the seasons for gathering it. For this purpose two opposite longitudinal incisions are made through the whole length of the trunk, and two others transverse to the first, at the extremities; the bark is then detached by inserting a hatchet-handle shaped like a wedge. Great care is required not to wound the alburnum, as the bark is never renewed upon the injured parts. After being scraped, the bark is heated on its convex side and laden with stones, to flatten it and render it easier for transportation.

The cork produced in France may be reckoned at 17,000 or 18,000 quintals, and when the sheets are smooth and even each quintal affords 7,000 or 7,500 corks eighteen lines long. It is computed that 115,000,000 of corks are annually consumed in France.

This tree would be an important acquisition to the United States, and particularly in those parts called the prairies, in which nature has withheld the important requisite of trees to complete the landscape. In these regions the tree would not only prove a great ornament, but at the same time it would serve to break off the northern blasts of winter from the farm and the live stock, and at stated intervals would yield a valuable harvest of cork, and at the end of centuries the tree itself will serve many valuable uses for the mechanic, as well as for fuel. We deem the subject worthy of the consideration of all land owners where the tree will flourish, and particularly at this period when public attention is so generally being turned to the culture of the vine.

STEAM PLOWS.

The subject of steam plows continues to attract considerable attention in England as well as in this country, and the interest will continue to increase, as the importance of the subject is considered. We have frequently taken occasion to remark upon the steam plow, as exhibited by Fawkes, and others of similar character, with the view to show that their plan is altogether impracticable, and never can come into general use, and that the mode of operation must be entirely changed, before the public can be benefited by the application of steam to agricultural purposes. In an opinion, as expressed upon this subject, we find that we are not alone. In a late number of the New York *World* we find the following remarks upon the subject, which so nearly express the views that we have taken that we give place to them, in the hope that they may tend to change the channel of thought and invention to the only mode through which this untiring agent can be substituted for horse power in the operation of plowing. Our chief objections, as heretofore expressed, to this plow, have not covered so wide a ground as those given in the *World*, for we regard the objection to the great weight of the locomotive necessary to overcome the resistance created by drawing (or propelling) a gang of plows, paramount to all others, and can never be remedied. Nor can stationary power, applied to plows of that character, succeed any better. Says *The World*—

"A year ago, at some of the large agricultural exhibitions, particularly at the National held in Chicago, a demonstration was had in this new invention, to test its applicability, as an actual plow, in superseding by the use of steam and machinery the ordinary plow now used in cultivation. The trial was not conclusive—not satisfactory even to the committee appointed to try the machine, although the large premium offered for a successful one of the kind was claimed by the inventor. There were defects in its principle, and still greater defects in its mechanism. These were all to be remedied and overcome—so said the inventor. It has again been tried this fall at the late Illinois State Fair, at Jacksonville, but with no better success, as we learn, than before. What the alleged impediments to success may be, we do not know; we do not much care, even; for a steam plow, or a machine to drag behind, or drive before it, a gang, be it three, five or ten veritable

plows, of the shape and kind now used on our farms, we believe will prove no achievement, either in economy or excellence of work, over that which it is intended to supersede.

"The expressions of such opinions may be thought the very essence of 'fogyism' in this day of invention and improvement. Yet we so believe. It will take too many words to give all the reasons for our belief, but a few we will name, even admitting the thing to finally prove successful:—

"1. The expense of the machine will exclude it from all small farms, and gardeners' uses, in the contracted area of their premises.

"2. Its size and cumberous working will require fields of great size, and long stretch of 'lands' to range upon, without frequent turnings. The soil, too, must be of a level surface, or, if undulating at all, in such regular undulations that the 'dip' and positions of the several plows composing the 'gang' can be uniform.

"3. Leaving out several other objections, the fatal one exists, that the plow itself, as now constructed—no matter how good it be—is an imperfect implement, founded on a false principle for the perfect breaking up and movement of the soil, and fitting it to receive the seed for a crop. Such being the fact, as we assume it, the 'plow' is not worth the pains of applying it to steam use, and the same skill and invention had better be applied to some other machine.

"Why is the plan imperfect? Simply for the reason that soil, to be perfectly prepared to receive the seed and produce a crop, should be thoroughly pulverized, deeply dug, and rest on a soft bottom beneath; which last, though not penetrated by the instrument which has worked above it, shall still admit the roots of what ever grows above to enter and run down, if they choose to do so, and draw whatever nutriment they can from below. In short, if land is plowed six, eight or ten inches deep, and its upper strata be lifted and turned over to either of those depths, the lever power which raised it is exerted to the same extent to press down still more compactly than before the soil beneath it. That is—the plow, in its work, presses both ways—down as well as up; whereas, the work, for the benefit of cultivation, should be lifting only. The pressure down is all wrong, and, so far, does a positive injury to the sub-soil, let the comminution of that above be ever so perfect. In light soils, we admit that the downward pressure is not always prejudicial to the future crop. But in clay, or heavy soils, it must be so. The sub-soil surface of the furrow below is polished, from the pressure of the bottom of the plow upon it, as the top of the inverted earth is lifted from it, and turned over into the adjoining furrow; so, unless the roots of the growing crop be very strong, they must seek their food only near the surface, or within such depths as the plow may have penetrated, and thus be liable to be cut short by drought. For perfect cultivation, these difficulties must be obviated.

"Well: and how? By the invention of a rotary digger. That is to say, a cylinder revolving a shaft supported at each end on a frame, on the principle of a common farm or garden roller; that cylinder to be filled with spiked or claw-formed teeth; and by its rapid revolutions, these teeth must dig up the ground, six to twenty inches deep, as may be desirable, leaving the ground light, free, and thoroughly pulverized, to receive the seed of whatever kind. A drill may be attached behind it, for the purpose of sowing or planting the seeds, if necessary. This, in short, is the grand desideratum which we look for in the perfect cultivation of the soil. The earth, by this operation, will be loosened as far down as the machine goes, and the sub-soil, beneath what is loosened, will not be packed still harder than it lay before, as with the plow. It will be readily seen that, in this proposition, the plow is superseded entirely, as it would be in all free soils, and an instrument of altogether another kind has to take its place.

"Now, can this implement be invented and perfected for practical and easy operation? We think so.

It need be no more complicated than a reaping or a mowing machine. It may be made to work either by horse or steam power; and, without divulging a secret, we are of opinion that there is now in progress, in Western New York, a machine possessing the right principle of a rotary digger, and that it will soon be in operation. That it will be perfect in its first movements, we do not say; but we believe that a practical machine of the kind will, in due time, be accomplished.

"Can the small farmer use such a machine economically, even if it be invented and perfected? We believe so, if his land be free from stones and roots. Its portability and compactness will render it easy to manage, and the celerity with which he can put in his crops by its aid will enable him to clear his land from impediments to its working, which the dilatory and only partial labor performed by the plow would not. The great advantage of such a machine, however, would be in the vast prairie cultivation of the Western States, on broad river bottoms, and in large fields, where the surface lies smooth, free from stones or other impediments, and where a timely cultivation and deposit of seed is indispensable to successful cropping. Sugar and cotton lands, as well as those for corn, wheat and other grains, will be immensely benefitted by this rapid cultivation. The present season, by its continuous spring weather, so timely for plowing, seed-sowing and germination, as well as for the after-growth of the plants for several weeks in succession, in several of our States, most fortunately rendered a service not often witnessed. The same genial action of the elements, in a much briefer time, by the aid of a rotary digger, would enable the the cultivator to get his seed into the ground, and secure a favorable crop during ordinary seasons, unlike the present through which we have passed.

"We could discourse further upon this subject—hardly, perhaps, to the edification of our readers; and this must suffice for the present. We trust that, before the autumn agricultural and mechanical exhibitions are ended, we shall

learn that something better than a steam plow has been attempted, if not effected; and that an implement, on the principle of the rotary digger may be placed before our farmer friends, to give them a more thorough cultivation of their soils than before."

[Written for the Valley Farmer.]

FARM NOTES FOR JANUARY.

We have promised to furnish some notes of farm work that should be done during each month of the year, but as this is the leisure season for farmers, we do not know that we shall be able to make any suggestions of particular interest. Our promise, however, must be fulfilled.

This is the best month to lay in an ample stock of firewood for the year, if it has not before been attended to. Be sure to get enough to last a whole year. It will save you a great deal of trouble. It is a great annoyance to be getting out of firewood in the busy season and taking men and teams from other driving work to haul up a load or two of wood every week or two. The wood thus hauled is frequently green and unfit to be used. It is much more economical to use seasoned than unseasoned wood. Extra fire and heat are required to dry up the sap and water contained in the wood. And then it is so provoking to have wet, green wood that can hardly be coaxed to burn! The proper way is to have the wood for the year hauled up, cut up in proper lengths for use, and piled up under shelter to be used at all times without trouble. It is then well seasoned. There are no complaints—no calling upon the hands to cut wood. Not one farmer in twenty thus lays in his stock of firewood. Labor is cheaper in winter, and with proper sheds the wood can be cut in proper lengths in the inclement weather when hands can be at work at nothing else.

In January the tools and implements should all be examined and the defective ones repaired, so that they may be ready for use. Many neglect these repairs, at this season, and wait till they are wanted, when a team must be taken from pressing work, and some implement sent off to the blacksmith shop or elsewhere, to be repaired. This is a very bad practice. Now is the time to repair everything of the kind. Have paint ready also, and give a coat to such implements as need it. It will greatly preserve them—keep out the wet, and prevent them from decaying. If you are needing any tools or implements, purchase them now, get them home, and don't be obliged to send for them when you need them most, as we have seen many do.

Of course we expect you have a good tool-house. If you have not, lose no time in making one. It will pay you one hundred per cent. on its cost. And if you could have put up in it a blacksmith's bellows, so that you could heat iron, and also get a few carpenter's tools, so that you or your men could make repairs at any time, the benefits would be still greater. This leaving tools and implements exposed to sun and storm is one of the most costly operations on the farm. We hope none of the *Valley Farmer* readers have plows, harrows, mowing machines, or anything of the kind thus going to destruction! If they have, by all means send for them at once, put them under shelter, give them a coat of paint for the damages received, and resolve never to permit the like again. Have you shelter for your wagons? How soon they will go to destruction if not protected!

Not only do all implements, &c. need shelter, but the domestic animals still more. Don't let the horses, cattle, sheep and swine shiver and suffer in the cold storm. Let mercy, if nothing else, plead with you to keep them from suffering. Physiology teaches what experience proves, that animals do not require near the food to thrive and fatten when protected from storms, that they do when exposed to the inclement seasons. Motives of economy alone should prompt you to provide them with shelter; and do it now, if undone till this time.

If the season will permit, and the ground is sufficiently dry, it is a good time to plow, this month, and especially to use the sub-soil plow. An extra team to draw the sub-soil plow will not be missed now—and next summer the difference in the crop where it has been used and where it has not will be marked. Our climate is quite subject to droughts, but by plowing deeply and then following with the sub-soil plow, we loosen up the earth to such a depth that the roots can go down far enough to reach the moist earth, and thus a fine crop can always be raised. Farmers must learn to plow more deeply, and must use the sub-soil and trench plows more. They will thus double the amount of the crop. It is not the number of acres we cultivate so much as the number of bushels that we raise, that we should think about. By good, thorough cultivation, and proper rotation, the crops on most farms could be doubled.

This is also a good month to do under-draining, in this climate, in the open weather. The benefits of under-draining have been so often spoken of and the value so often proved, that we will merely mention the subject here. If you have any wet, marshy places on the farm, this is a good time to open surface drains from them to lower land; they will thus become profitable. The Mole Drain Plow is valuable for this purpose, and, indeed, it is valuable to be used on all lands that have a clay sub-soil, and a slight slope. Plenty of running water for stock can be obtained from fields of large extent, by making under-drains. There are a number of these plows that we have seen in use, but we think none are superior to that manufactured by A. Hammond, of Jacksonville, Illinois.—These draining plows are not recommended for sandy soils, or stony land—but in stiff clay land, a perfect tile, so to speak, is formed in the soil, by the pressure of a shoe, two or three feet below the surface, through the clay, thus leaving a free passage for the escape of all water.

This is a good month, and the proper month, to be looking about for good seed, whether of grain or vegetables. Get the best you can hear of, ready for use, when wanted. Run all your

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seed grain through the fanning mill several times to blow and screen out, all foul, poor and imperfect seed. Be determined to raise the best crops of any of your neighbors; and to do this, you must sow only the most perfect seed—"What you sow you shall reap." Recollect this, and sow the seeds of no weeds, or you will reap them again.

We intended to say something about cultivating and storing the mind—for there is no more favorable month for this purpose, than January. Knowledge is just as much needed by the farmer as by any other professional man, and especially that knowledge pertaining to his profession. If he has not provided himself with reading matter, he should lose no time in doing it. He wants to be posted with the current events of the day, and should by all means take his own county paper, even if it is poor. Good support will make almost any paper good, and *vice versa*. Next in importance should be his local agricultural paper. He will find an agricultural paper published in his own latitude, more valuable, more reliable, than one published far off; but if he can take more than one—and he will find it for his interest to take several—then let him send for the best wherever it may be published. Farmers feed their bodies, why should they not feed their minds? And how soon children become interested in agricultural journals, and learn to love farming by reading them! By all means we should one and all sustain good agricultural papers, contribute our experience to them, and persuade our friends to take them, for they are devoted to the promotion of our dearest interests, and should receive all proper encouragement from us. But we have consumed more space than we intended to, and will continue our talk next month, when we hope to have something more important to speak of. CASSIA.

[Written for the Valley Farmer.]

NURSING.

BY EMIL MALLINCKRODT.

For rural economy there is nothing paramount in importance to maintaining or even increasing, if possible, the natural fertility of a virgin soil. For tilled land the restoration of its fertility on the grandest scale will ever be the culture of the grasses or clover. Lands capable of producing these kindly, bear in themselves the property for the easiest and cheapest means of restoration known to us. One-third or fourth of all cultivated lands, studded with blue-grass and clover, grown thereon for two or three subsequent years, the grass but little pastured, and the clover cut once yearly, would enrich the soil effectually. So restored, this land would admit of the best possible rotation: 1. Wheat after clover and grass; 2. Corn, with stable manure, as far as this will go; 3. Oats, sown with clover and grass seed; 4. Grass and clover.

Now, granted that every good farmer has provided himself with well enclosed, ample blue-grass pasture ground, ornamented with groves of fine trees for shelter and beauty, and ponds of water therein—if running water should be wanting or fail. Could not all the farms in our Western States, where the soil is generally good or even very fertile, by such system be preserved in all their original virgin fertility? Why is a method so easy and satisfactory not generally pursued?

To speak of ponds, nothing is easier or cheaper than to make them, for the sake of good stock-water. Almost anywhere on clayey soil, in a locality of a little ravine, or on any depression of the surface where water naturally collects, dig a round cavity of fifty feet or more in diameter, five feet deep, and wheel the earth across the lower part of the ravine to forth a dyke, or haul it away if it is to be made on a uniform depression of the ground. If a dyke is required, one corner of it should be kept lower for the superfluous water to run off gradually; for, if ever it should run over the dyke, it would certainly wash away; nor should any of the surrounding lands be cultivated, but they should be kept in grass to prevent its filling up by washing. These ponds are also suitable for rearing fish, and should be surrounded by trees in whose shade the water will keep cool and fresh for the health and well being of your domestic animals.

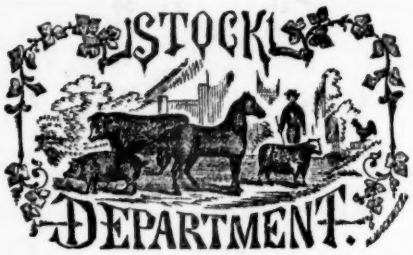
CURING HAMS.—At a late Fair of the Maryland State Agricultural Society, the first, second, third and fourth premiums were awarded to hams cured as follows:

1st. To 150 pounds of ham, take 1½ lbs. saltpetre, 4 quarts of fine salt, with molasses enough to make it a paste; rub well on the flesh side; let it lay 4 weeks; make a pickle strong enough to bear an egg; let the hams lay in it 4 weeks; then hang and smoke. Two days before removing from the smoke house, paint with black pepper and strong cider vinegar, after which bag them.

2d. Ham weighing 10¾ pounds, cured by Mrs. Samuel Carr. Half bushel of salt, 2 pounds of saltpetre, 2 pounds of black pepper, 2 pounds of cayenne pepper, 8 pounds of brown sugar. This mixture rubbed on 50 hams, averaging 10 pounds, smoked gradually with hickory chips.

3d. To 100 pounds ham, to average 10 or 12 pounds, half peck ground alum salt, 1 pound sugar, 1½ oz. saltpetre, 1 quart hickory ashes, 2 ounces salaratus, 2 ounces red pepper; mix them well together, rub the hams well, and stand them on their hocks, and let them remain for five weeks, then hang them up and smoke them about one week. For 1,000 lbs. hog meat, half-bushel of fine salt, half a gallon best molasses, 3 pounds of brown sugar, 2½ pounds of saltpetre, pounded very fine. Mix all the ingredients well together in a large tub, and rub the meat then with it until you absorb the whole quantity. The meat must be taken out of the cask once a week, and rubbed with the pickle it makes. The two last times you take it out, add at each time a plate full of alum salt. It ought to remain in pickle five or six weeks, or according to the size of the meat.

For 100 pounds of ham, 8 pounds of salt, 2 ounces of saltpetre, 2 pounds of sugar, 4 gallons of water; the ham remaining in pickle eight weeks.—[*American Farmer.*



DAIRYING IN THE WEST.

The question has often been asked, Why cannot dairying, particularly cheese making, be carried on to advantage by our Western farmers as well as it is in New England or on the "Western Reserve?" We answer that in many sections it may be, if the same care and attention be given to the details of the business. In fact, there are many localities in the West that possess advantages for dairy husbandry not enjoyed in the most favored dairy districts of the Eastern States.

Dairying is a business, like any other, in which "Practice makes perfect." The justly celebrated Goshen cheese, manufactured in and around the little town of that name, owes its excellence of quality, not to any superior natural advantages possessed by that particular locality, but to the care and skill displayed in its manipulation. The dairy districts of New England and New York, are chiefly confined to those cold, rocky, mountainous regions not well adapted to grain growing; but possessing a comparatively strong, moist soil, it yields grass in abundance, and hence better adapted to dairy husbandry than to any other department of agriculture, and the farmers making it almost an exclusive business, they are enabled to carry it on to the greatest perfection, supplying butter and cheese unsurpassed by any other in the world.

As all cannot be farmers in the New England States, another class turn their attention to manufacturing. These manufactures embrace every article from the most elaborate and perfectly wrought fabric of cotton, wool and silk, to the minutest article required in civilized life. These mechanics and artizans generally succeed in their enterprizes, because of the lack of the natural advantages of soil and climate necessary to afford them profitable employment in agriculture, and their energy, industry and inventive powers are brought into the highest degree of exercise, and hence they succeed.

There is no section of New England where dairying can be carried on to better advantage than it can in the rich blue-grass region of Kentucky, and on similar situations in Indiana, Illinois, Missouri, and some of the more Northern and Western States. But these countries are so admirably adapted to the growth of the great staple crops, wheat, corn, hemp, tobacco, and stock growing, that most farmers prefer to bestow their attention upon these to the more laborious duties of the dairy. In the dairy districts of the East the chief labor of the farmer is in the summer to secure a supply of hay to carry his stock through a long and tedious winter, while that portion of the year requires almost his entire care and attention to find and take care of his stock, with an hour or two of each day through the year required to do the milking. But in the Western States we have named, the climate is more favorable, requiring comparatively little labor to secure a supply of hay and fodder for the winter, and but little time for the care of cows. But to succeed in the dairy business, and to render it a profitable branch of Western farming, it should be made a separate business, under the charge of special managers, who are familiar with the process; and there are many farms on which this could be done to great advantage, not only with immediate profit to the farmer, but of infinite advantage to the farm. For with the connection of a dairy much that would otherwise be lost may be turned to account; and the entire farm vastly improved by the manure that may be made, while the whey and sour milk from the dairy may be turned to good account as food for the swine.

There are hundreds of families in the East that might be induced to take charge of Western dairies, who are familiar with the process of cheese and butter making, and carry it on independently of the ordinary operations of the farm.

The little town of Goshen contains about forty-five square miles of territory, and one-third, at least of this is barren rock or swamp, and yet the amount of the cheese that is annually exported from this town amounts to near one and half millions of dollars; some of this, however, is produced in some of the adjoining towns and finds its way to market through the merchants of Goshen. The cheese from this market usually brings two or three cents a pound more than the cheese from other less noted dairy districts, and only because of the perfection of the process to which its manufacture is carried.

In the *Western Reserve*, a territory embraced in North-Eastern Ohio, and formerly known as New Connecticut, and originally settled by peo-

ple from Connecticut, the dairy business is extensively carried on. The butter and cheese from this section is regarded in market among the favorite brands.

HORSE STABLES.

Many farmers are too negligent in providing proper stables for their horses. While the horse is one of the most faithful, as well as the most useful servants of man, he should always be provided with comfortable shelter, and a bountiful supply of suitable food; and at the present advance in the price of horses all over the country he should receive increased care and attention. Many of the stables in the country are mere rail-pens in which horses are allowed to stand day after day, and week after week, in their own filth, without a change of litter or bedding, even if this comfort is ever furnished to them. Stables should be warm and comfortable, and sufficiently tight to exclude the severity of the weather, but always provided with thorough ventilation. Many valuable horses are annually injured permanently, if not ruined, for the want of proper ventilation and light, or by the admission of light from an improper direction. In order to insure the proper ventilation of a stable, it should be built high between floors. They are often contracted between joints under the impression that they are warmer; but, if a horse is to suffer, it is better that he should suffer from cold for a few days in winter than suffer more serious permanent injury from impure air. The world is just beginning to wake up to the importance of proper ventilation of dwelling houses. An untold amount of suffering has been borne by the human family in consequence of illy-ventilated dwellings, owing to a want of proper knowledge of the laws of ventilation and health. Horses confined in stables are more subject to disease and suffering in poorly ventilated stables, because of the gases generated from the accumulated refuse in the stables. Stables should not only be built high, but openings should be made in or above the roof for the escape of impure air. Ventilation secured above will not subject the horses to a current of cold air, as is the case when doors or windows are left open in the opposite sides of the stables. Nor is the object of ventilation so well secured in this way as when the rarified and impure air is allowed to escape from above, because the impure air of a stable is always lighter than the external atmosphere.

Another essential point in the construction of stables, is form and manner of arranging the stalls. These should not be contracted to the narrow dimensions of those in city stables, but they should be amply spacious to allow the horse to lie down and get up with ease. Perhaps an earth floor to the stalls is the easiest for the horse to stand upon, provided they are kept in order, and properly littered. Stable floors, when laid with plank, are sometimes too much inclined backwards for the animal to stand with ease, and it is said by some that the muscles of the back and sinews are often so much strained as to result in permanent injury. But inclination backwards is less injurious to the animal than to have the floor pitch forward, as we have known some to advocate. A perfectly level floor is undoubtedly the most natural and easy for the horse to stand upon, but in order to carry off the urine, whether the floor be of earth or plank, an inclination of at least *one and a half inches backwards*, should be allowed in the length of the stall.

Stone floors are common in stables in some parts of Europe. In these, grooves are made in order to insure more perfect drainage; but hewed stone floors are chiefly confined to the the wealthy. The best form of floors is of wood, with a slight inclination, and then perforated with holes or grooves, so as to allow the water to pass off into a reservoir or drain below, where it will be absorbed by the litter provided for the purpose, giving additional value to the manure, or may be applied to the land in its liquid form, after being suitably diluted. Whether this last provision is regarded by some as in advance of the age or not, the time is coming when it will be generally adopted. But, at any rate, secure good drainage to the floor, for without this an undue accumulation of ammonia will be the result, which is not only injurious to the health of the horses, but to the attendants also. And when hay is stored immediately above the stalls, or over the apartment, it is rendered unfit to be given to any domestic animal on account of the amount of volatile gas absorbed by it that always abounds in stables.

By having an abundant supply of litter for the stalls of horses their comfort is greatly promoted, not only in keeping them warm in winter, but in keeping them clean at all times, and this, when changed as often as it should be, will produce an immense amount of the best manure, which may be manufactured and returned to the wasting soil.

Straw cannot always be had in some localities for littering stables or for bedding horses; as a substitute, saw-dust is generally made use

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of. Perhaps this is the next best material for the purpose. It readily absorbs the urine, and when practically decomposed makes an excellent manure; and on heavy soil the mechanical effect of the saw-dust is highly beneficial. When neither straw nor saw-dust are convenient, sand makes a good bed, and may be less injurious to the horses' feet than vegetable matter, where the latter is allowed to remain so long as to commence active fermentation. But with the provident farmer old straw and other vegetable litter may always be procured in abundance for the stable and for manure.

Winter Care of Stock.

The following remarks, which we copy from a number of the *Irish Farmer's Gazette*, are particularly appropriate to the season, and worthy the attention of all who have the care of stock:

1st. *Regularity.* The stated hours of feeding must be carefully attended to, and no deviation ought to be allowed. Cattle very soon know the time they ought to receive their allowance of food; and if it passes without the expected supply, they get restless, and express their uneasiness by loud bellowings.

2d. *Cleanliness.* From an examination of cow houses or cattle-sheds in general, we would be led to imagine that cattle were naturally dirty, and that their owners, therefore, consider that the most profitable mode of keeping them, is to pay as little attention to keeping them clean as possible. The cow-houses ought to be cleaned out twice every day, and plenty of litter allowed for the cattle to lie upon. The troughs ought to be kept always sweet and clean; and, for this purpose, the feeder must remove all unconsumed food, whether turnips or straw, previous to giving a fresh supply, wiping out the troughs with a wisp of straw.

3d. *Quiet.* This is a most important point; and so much ought it to be attended to, that the cleaning of the houses should never be done whilst the cattle are eating their turnips; neith- ought the curry-comb (which ought to be used on all feeding or milch-cattle as on such as are constantly tied up) be applied whilst the animals are feeding; nor should they be disturbed after they have laid down, to undergo this process. Immediately after being fed, and before they lay down, is the best time to clean out the houses and curry the cattle; and whenever this is over, let the doors be closed, and the cattle left to enjoy quiet until the next feeding time comes round.

4th. *Ventilation.* Warmth is essentially necessary to the health of milch cows and fattening cattle: but this must not be the stifling heat of an ill-ventilated byre. Many diseases are caused by want of attention to ventilation; and we believe that to this pleuro-pneumonia owes its origin and fatality. At the same time cattle must not be exposed to a draft of cold air. The best ventilator is one rising two feet above the ridge of the roof, covered with slates, and having Venitian blinds in the four sides. The heated air will ascend to, and escape through this ventilator, a current, but not a draft being kept up by means of small openings in the walls at the ground, sloping upwards, and covered with gratings. Young cattle in sheds, and having access to straw yards, of course do not require ventilators; all that is necessary is to protect the straw yards from cold winds, by means of sufficient walls, where yards are not protected by the surrounding houses.

Docking, or Amputating of the Tail of the Horse.

BY J. GAMGEE, V. S., LONDON.

My father Mr. Joseph Gamgee, who for the last thirty years has been in the habit of docking horses, here or in Italy, has learned by his long experience that the best mode of performing the operation is as follows:

A groom walks up to the horse's head, standing in his stall—for it is best not to disturb the animal—whilst the tail is prepared. The preparation is merely the separation with the fingers, of the hairs at the part where the tail is to be docked. The line of demarcation, by the separation of hairs, is then made perfectly distinct by the latter being properly tied upwards and backwards. The groom then holds up the near fore leg, and an assistant holds the tail straight out behind, and with a methodical closure of a sharp docking-iron, the horse loses the end of his tail without perceiving it; the only movement generally effected is that of bending his back, and momentarily shrinking. Never will a horse attempt to kick. His foot being now let down to the ground he has to suffer no more pain, the ligature which has fixed the hairs is undone, they are allowed to fall in their natural position and then tied together below the stump, rather closely up to it, but not over it, and drawn as tightly as will admit of its not slipping off unless pulled away. The morning after the operation, the tail is loosened, the clot, or eschar on its cut surface, is not looked at or interfered with, the outer hairs are combed out, and the drops of blood which have dried on them cleared away, and the horse is ready to go to his ordinary work.

We have a splendid lithograph in our portfolio, which strikingly depicts the barbarity attending the use of the actual cautery in this operation. With blinds over the horse's eyes, a slide line on his leg, a stout farrier's twitch on his nose, and a halter on his head, the sensible and frightened animal is pulling back, excited and furious, nearly sitting on his haunches, whilst the red hot ring of iron is being applied to the raw stump, previously powdered over with rosin. The smoke and odorous fumes, are blinding the operator, who is in as awkward a fix as the poor horse himself. The print we allude to, although a masterpiece, but faintly represents the reality; and, as I one day was mentioning my father's practice to a veterinary surgeon, he exclaimed, "Ours is certainly dangerous work, and with the best care, assistants or operator

stand a chance to have their brains knocked out." I must mention that this was pre-eminently a practical man, and all practical men, here or abroad, have until now seared in docking: at least so far as we have learned, with one exception. And it is also a practical, as well as a scientific man, for whom we have the greatest reverence, that said he had been in the habit of tying over the stump, and securing some tow between the hairs, but the practice was not found to answer in all cases. My father has often told me that he has heard of persons tying over the stump; and thus inducing gangrene of one or more joints of the tail, for the pressure requisite to stop the coccygeal arteries in this way is considerable; whereas, when the hairs are tied below, it is the natural hæmostatic, consisting firstly in the retraction and formation of a temporary clot, and secondly of a temporary plug, that comes into operation.

We have seen tetanus resulting from docking by the usual method, and heard of several cases of sloughing away of several of the coccygeal bones. We are well aware that a simple prick may cause tetanus, but it is rather strange that to my father such accidents are unknown, because the healing by granulation, under a natural eschar must be more in order than the separation of what has suffered by the hot iron, and reparation by exuded plastic lymph.

If simplicity is the undeniable seal of truth and humanity to be held in view by all operating surgeons, then there is no doubt that a clean cut is no severe operation, and tying of hair unassociated with difficulty or sensation. Some persons may say it is most humane to leave tails as they are; so it is, but men will have their horses docked, because in the sight of the world a horse with three inches taken off the end of his tail carries it better, and it look slighter. We have heard horsemen of all kinds repeatedly say, "That horse will be all the better for having a little of his tail off," and we could not but agree with them.

But, lastly, some diseases may necessitate amputation of the tail. We admit this is extremely rare, but we have had to do it ourselves, and not only in the horse, but have seen it resorted to for a peculiar disease of the coccygeal bones in cattle. In the ox, we are aware that nothing can answer better than the actual cautery, and as the operation is as rare as amputation of one of his extremities, we think it of little importance; but in the horse, had it to be performed only once in a practitioner's lifetime, the simplest and best mode should be adopted; just as if a veterinary surgeon were called upon to tie the carotid to the femoral artery, or to perform the Cæsarian operation, he should be expected to do it as a man of science, as a surgeon, and not empirically, as in days of yore.—[*London Vet.*

A COLT FROM A MULE—*San Marcos, Texas, Oct. 7, 1856.*—I have a mule that I raised, three years old in June last, that now has a colt by her side. Please say what I must call it. Its ears are not like the mule nor the horse. In other respects it resembles the mule. If any one disputes it, I have the mule and her colt in my lot. The doubting Thomases can see for themselves. JOHN D. PITTS.

BEST BREED FOR MILK.

To many rules, which may be considered general, there are so frequent exceptions as to very much lessen the value of the rule, and to cause many to doubt even its existence. This is particularly so with regard to the milking qualities of different breeds of cows. A gentleman of Maine, Cook County, Ill., asks, "which breed of cows is preferable for dairying, the Devons or Durhams?" Were we keeping cows for dairy purposes, we do not think we would be confined to any one breed, but would strive to get the best milkers regardless of breed. We have seen Durham cows that it would be hard to excel in this respect, and, as our readers know, many of our natives and crosses are excellent milkers. In this respect there is a great difference in different animals both as to quantity and quality—some cows giving double the quantity of others—while there is as much difference in the butter-making properties of the milk as there is in the quantity. First class cows of native breeds will sell as milkers for $50 or $60, while others would be dear at $20, and can be bought for less. There is the same difference in this respect in all breeds, we believe; and this should teach the dairyman to select the best individuals regardless of breeds. That some breeds are, as a general thing, better milkers than others, must be admitted, and we will endeavor to give, very briefly, the claims of each in this respect:

Short Horns or Durhams.—The attention of breeders of this stock has been directed mainly to the making of beef—the production of an animal that will mature early and give the greatest amount of the most valuable beef and the least coarse meat and offal for the amount of food consumed. Too little attention has been given to the development of the milking qualities. On this point a writer in the (British) Cyclopedia of Agriculture, says: "It has however, occasionally been urged that, in one particular, the Short Horn is deficient. By many the breed is yet considered to be but indifferent milkers. Perhaps the best answer to this objection would be a walk through the establishments of our London dairymen. Nearly every cow tied up here will be found to be of the Short Horn sort. When the aim is to have them good milkers, they can generally be insured; on the other hand, the exhibitor at a prize show sacrifices one quality for the other. The selection has only to be carefully made in favor of milk or meat, and for the production of either will the Short Horn be found eminently qualified." Were these animals bred more with reference to dairy purposes, judging from good specimens we have seen, we think they would make excellent stock for the butter and cheese maker.

Devons.—The milk of Devon cows is very rich, and while we have known fair milkers of this breed, as a general thing the quantity given is too small to make them profitable for the dairy.

On this question, however, we know there is a difference of opinion, and it is said some good dairymen prefer them to most others. For working oxen no breed excels, if any equals them.

Ayrshires.—This is an excellent breed for the dairy. Much pains have been taken to develop their milking power, and it is now of the highest order, and a recent English writer on dairy cows, says, "no other breed can equal them for the converting of the produce of poor or medium soils into butter and cheese." Youatt says: "The quantity of milk yielded by the Ayrshire cow is, considering her size, very great. Five gallons daily, for two or three months, and one gallon and a half during the succeeding four months. This would amount to more than 850 gallons, but allowing for some unproductive cows, 600 gallons per year may be the average quantity annually from each cow."

Alderneys.—In appearance the Alderneys very closely resemble the Ayrshires. The chief difference between them is that the forte of the latter lies in the abundance of their milk, while that of the former is in the richness of its quality. So rich is the milk of the Alderneys, that it is said the admixture of a milking of one of these cows with that of a dozen of some other breed will sensibly improve the quality of the butter produced from the whole. The richness of the cream and butter produced from their milk makes them great favorites in the private dairies of the wealthy people of England where fine quality is the great object sought, regardless of cost.

Some experiments having been conducted at the Earl of Chesterfield's dairy, it was found that in the hight of the season the Alderney gave 4 gallons and 3 quarts per day; the Dervon 4 gallons and 1 pint; the Ayrshire 5 gallons; and when this was made into butter the result was, from the Alderney 25 ounces, from the Devon 28 ounces, and from the Ayrshire 34 ounces. George Vail, of Troy, with five Short Horn cows selected from his herd, produced in thirty successive days 202 pounds of butter. E. K. Evans, of Marcy, Oneida Co., made in the same time, and with the same number of cows, selected from his native herd, 217 pounds of butter. This trial was made in competition for the State premium, and speaks well for our native cows.

With care in breeding from our best native milkers, we have no doubt a class of animals may be raised up which would be unequaled for dairy purposes. In setting a value on a cow, too little attention is paid to the *quality* of the milk given, and we have no doubt a good cow has often been exchanged for one giving a greater quantity of milk, when, for making butter or even cheese, she may have been much better than the one who superseded her. Of course, if the milk is sold by the quart, the quality is not a matter of much consequence, for in that case milk is milk, if it is ever so poor; though we don't know that it would be any less honest to water rich milk down to the *necessary weakness* than to keep cows known to give a large quantity of the very poorest milk.

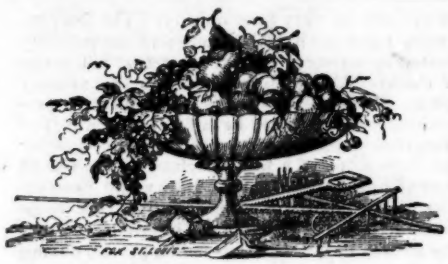
On this whole subject there is much need of light, and farmers and dairymen might try a great many experiments without subjecting themselves to much trouble or cost, the result of which would be productive of great good to themselves and the producing interests generally.—[*Rural New Yorker.*

COLIC IN HORSES.—Colic in horses is a very common disease, and if taken in time may be easily cured in most cases. It is not unfrequently confounded with inflammation of the bowels, but is easily distinguished as follows: Colic has no increase of the pulse, which is not over fifty a minute; the animal often rolls; the disease intermits, and there is but little fever.—With inflammation of the bowels there is much fever; the pulse is sometimes a hundred a minute, the attack is gradual, and the disease does not intermit.

When colic arises from bad food, a pint or so of a solution of saleratus will often afford entire relief. As it assumes more of a spasmodic character, peppermint and ginger may be added.—We have used with entire and immediate success, a small spoonful of saleratus, the same quantity of ginger, and a teaspoonful of peppermint, added to a pint of nearly boiling hot water, and given from a junk bottle. Powdered charcoal is one of the best and safest medicines for any disease resulting from derangement of digestion—and two or three ounces or more mixed with water, may be given at any time with great advantage.

Inflammation of the bowels is generally increased by iritating medicines. A drink of slippery elm, hourly, and giving the horse but little food, and letting him rest, is safe treatment.

ON SOUNDNESS IN HORSES, AND THE PURCHASE AND SALE OF HORSES.—That horse is sound, in whom there is no disease, or any alteration of structure in any part, which impairs, or is likely to impair his natural usefulness. That horse is unsound, that labors under disease, or that has some alteration of structure, that interferes, or is likely to interfere with his natural usefulness. (The term *natural usefulness*, must be borne in mind.) One horse may possess great speed, but no endurance; another may endure much, but can only go at a snail's pace. A horse may be a habitual stumbler, and be liable to break the neck of the rider; another may be of an irritable constitution and a washy make, and lose his appetite and scour, as often as he does a little extra labor. The term unsoundness cannot be applied to either of these. The buyer can discern, or ought to know, whether the form of the horse is likely to render him suitable for his purpose; and he should try him sufficiently to ascertain his natural strength, endurance and manner of going. Unsoundness, we repeat, has reference only to disease, or to that alteration of structure which is connected with, or will produce disease, or lessen the usefulness of the animals. These principles will be best illustrated by a brief consideration of the usual supposed causes of unsoundness.—[*Ohio Farmer.*



HORTICULTURAL.

Report of the Kentucky Horticultural Society.

One of the leading objects of the American Pomological Society, is the discussion of the merits of the various fruits cultivated in the United States, and the formation of a list that promises well and a list recommended for general cultivation. These lists are made up according to the best judgment of the members present, and although these members represent numerous States in the Union, yet there are many fruits contained in the list for general cultivation that are not suited to all soils and to all localities. In view of rendering this list more perfect, at the meeting of the Society in the city of New York in 1858, it was proposed that committees be appointed in various sections of the country whose duty it should be to modify, and report upon, said list with the view to more perfectly secure the object the Society has in view.

At the late meeting of the Society, held in Philadelphia, the President, in his annual address, earnestly recommended that no additions be made to the list that promise well, until a future meeting, and that in the interim local committees and societies be requested to make up lists adapted to their several climates and localities. In response to said call, we are pleased to lay before our readers the Report of the Kentucky Horticultural Society, with very full and complete lists of apples, pears and peaches for orchards of various sizes, both for market and for family use.

It should be remembered that another similar committee, appointed for the same purpose and for the *same locality*, might probably slightly modify or alter said lists, yet we have no idea that, with the present knowledge of Pomology, it would be materially improved, because the Kentucky Horticultural Society has taken unusual pains to procure all the fruits of that locality, during the past fruitful season, with the view to make its list as perfect as possible.

With similar reports from competent committees of the various Horticultural Societies in Ohio, Indiana, Missouri and the other States, the list for general cultivation may be approximately perfected, and any person wishing to plant an orchard, with several of the nearest local lists so recommended, will be at no loss to select the varieties best suited to any particular locality.

This is an important subject, and we hope that every Horticultural Society will make it a leading object to prepare a similar report.

After long experience, we can fully endorse the following lists recommended by the Kentucky Horticultural Society as the most perfect that have yet been offered.

LOUISVILLE, KY., Sept. 1860.

The Kentucky Horticultural Society, at Louisville, in response to the questions proposed by the American Pomological Society, would respectfully submit the following report:

APPLES.

Question: In an orchard of 100 trees for family use, what *six*, what *twelve*, and what *twenty* varieties of apples, and how many trees of each variety, can be recommended for cultivation in the State of Kentucky?

Answer: 1st. For 100 trees, the best six varieties for family use are: 5 Early Harvest; 5 Maiden's Blush; 10 Rambo; 10 Small Romanite—Syn. Carthouse and Gilpin; 30 Wine Sap; 40 Rawle's Janet.

2d. The best twelve varieties for the same purpose are: 5 Early Harvest; 5 Maiden's Blush; 3 Carolina Red June; 3 American Summer Pearmain; 5 Rambo; 5 Pennsylvania Red Streak; 4 Yellow Bellflower; 5 Milam; 15 Wine Sap; 15 New York Pippin; 10 Small Romanite; 25 Rawle's Janet.

3d. For 100 trees for family use, to include twenty varieties, the following kinds and number of each are recommended, mainly because these varieties have been tried and have succeeded so well as to give general satisfaction. Numerous other varieties, many of which are Southern and Western seedlings and some of them of surpassing quality, are cultivated in different localities, but none of them have been sufficiently tested throughout Kentucky to be recommended in this list.

The varieties are named in the order of ripening and will give a succession of apples for the whole year:

2 White Juneating; 5 Early Harvest; 3 Carolina Red June; 2 Black's Annette; 3 Fenley—(incorrectly spelled Finley or Findley); 3 American Summer Pearmain; 5 Maiden's Blush; 3 Fall Queen; 5 Rambo; 3 Pennsylvania Red Streak; 3 Yellow Bellflower; 2 Milam; 10 New York Pippin; 10 Wine Sap; 5 Red Winter Sweet; 2 Pryor's Red; 5 Newtown Pippin; 20 Rawle's Janet; 5 Small Romanite; 4 Carolina.

Question: For an orchard of *one thousand trees* what varieties and how many of each can be recommended for market purposes?

Answer: 100 Early Harvest; 100 Carolina Red June; 50 Maiden's Blush, 50 Red Astrachan; 50 Fenley; 50 Fall Pippin; 50 Pennsylvana Red Streak; 100 Wine Sap; 150 New York Pippin; 200 Rawle's Janet; 100 Carolina.

The foregoing list embraces such showy and saleable varieties as will keep a city market supplied according to the demand, from the begining of one season to the commencement of the next.

For shipping to Southern markets by the boat load, large, bright, showy apples with a firm, dry flesh, have been found to be the most profitable; showy kinds are sold readily at high prices; there is less loss by decay arising from the sudden transit to a warm, moist climate, if the apples are hard and dry at the time of shipment, as they soon become, in the South, tender and juicy. Hence, hundreds of acres of land adjacent to the Lower Ohio river are planted entirely with the Carolina or with Rawle's Janet, the crops of which are sold extensively in the South.

Remarks on some of the less known apples in the foregoing list:

NEW YORK PIPPIN.—No apple has ever attained in so short a period such universal popularity in the West as the New York Pippin.—We confess our ignorance of its origin, further than it was brought from Illinois, but we observe that in that State, it has become confused with the Carolina, a different and altogether distinct variety. The New York Pippin is a handsome, showy, large apple, of good quality, and keeps well up to April, but is in good condition for the table in January and February. It is deficient in flavor, but is mild, hardly subacid, tender, crispy, and juicy.

FENLEY.—This apple originated in Kentucky, and was first brought into notice by the gentleman after whose name it has been called.

In south-western Kentucky the Horse apple, described by Downing, and a greatly inferior variety, has been erroneously called the Fenley. The Fenley is an apple of superior excellence, in general appearance somewhat resembling the Early Harvest and the Maiden's Blush combined, and for eating it is thought by many to be better than either of those varieties. It begins to ripen in July and continues to ripen gradually on the tree until the first of September.

PEARS.

Question: What are the best six and twelve varieties of Pears for Kentucky, on the *pear stock* and also on the *quince stock?* What varieties and how many of each are best suited for an orchard of 100 *trees* and for 1,000 *trees?*

Answer: Pears have never been extensively cultivated in Kentucky as an orchard fruit. The hot sun and the blasting and sap-drying effects of the prevailing westerly winds have greatly discouraged all attempts to cultivate the pear on a large scale. Seedling trees, many of them of enormous size and magnificient growth, and some of them half a century old, are scattered all over the State, but the fruit is, with a few exceptions, of very poor quality. The finer varieties have been introduced and successfully fruited by nurserymen and amateurs, but many of the kinds have blighted even in the nursery rows. Many persons think that a Western protection, such as would be afforded by a belt of evergreen trees, a hedge, a close, high fence, or the steep slope of a hill, absolutely essential to save the pear tree from the injury and destruction, so frequently experienced from the combined action of the heat of the afternoon sun and the strong, dry, west winds which prevail during the Summer and Autumn. Low branching is not a sufficient protection, as the branches are more frequently blighted than any other portion of the tree.

In regard to winter pears, nearly every known kind has been tried, and many have borne fruit very satisfactorily. The fruit, however, matures rapidly, and it requires more practical skill and more careful cellar arrangements to preserve pears in this climate than have been found necessary at the North. Some few persons, after some years of experience, have acquired the skill and knowledge necessary to preserve and ripen in perfection the Vicar of Winkfield, the Easter Beurre, and other late pears, but, as a people, we have not attained to such success.

The following kinds have been extensively cultivated, notwithstanding the difficulties in reference to the blight from unfavorable exposure, and in every instance, each kind has sustained its established reputation in regard to growth and quality:

ON PEAR STOCK.—Madeleine; Bloodgood; Tyson; Bartlett; Seckel—(hardy and prolific); Buffum; Belle Lucrative; White Doyenne—(does not crack); Flemish Beauty—(disposed to rot at core).

ON THE QUINCE STOCK.—The following have done well; Madeleine, Dutchess d'Angouleme, Belle Lucrative, Louise Bonne de Jersey, Tyson, Buffum, White Doyenne, Bloodgood, Seckel, and the Bartlett, for four or five crops.

So far as tested, the following have been grown with great success, on Pear stock, and some of them on Quince stock, viz: Dearborn's Seedling, Beurre Giffard, Doyenne d'Ete, St. Ghislain, Osband's Summer, Carey Pear, Lawrence, Stevens' Genesee, Rostiezer, &c.

PEACHES.

Question: What are the best six and twelve varieties? What varieties and how many of each are best adapted for an orchard of 100 trees and for 1,000 trees?

Answer: In deciding upon the best six varieties, a difficulty is presented in regard to whether white or yellow fleshed kinds, and whether free or cling stone kinds would be preferred.—A preference in these matters depends entirely upon individual taste.

The following list of twelve varieties, which are named in the order of ripening, and which embraces a period extending from July to October, is recommended for an orchard, for family use, of 100 trees, to be divided in equal proportions of each kind. For an orchard of 1,000 trees for market purposes, the earliest kinds sell

for the highest prices and the late kinds are generally in great demand for preserving; hence a larger portion should be of the early and late kinds, when prices are high, instead of the kinds that mature during the glut of the season:

Early Tillotson—free; Crawford's Early—free; New York Cling—(Synonim Pope's Cling); Van Zant's Superb—free; Old Mixon—free; Catharine—cling; Crawford's Late—free; Columbia—free; Grand Admirable—cling; Freestone Heath; Large White Heath—cling; Smock's Late—free.

In addition to the foregoing, the following varieties of good quality, could be added and would be desirable, as insuring by the diversity of kinds more certainty of a partial crop in unfavorable seasons. By some persons the white fleshed kinds are believed to be hardier than the yellow fleshed:

Hill's Superb Jersey—free; Druid Hill—free; Leopold—cling; Tippecanoe—cling; Early Red Rareripe—free; George the Fourth—free; Royal George—free; Hobb's Seedling—cling.

Malta, and many Southern seedlings have been cultivated and could be cordially recommended, if it were desirable to extend the list.

THOS. S. KENNEDY, Pres.

ORMSBY HITE, Secretary.

COMMITTEE.—C. C. Cary, W. M. Allen, J. W. Walker, Noble Butler, W. D. Gallagher, S. L. Gaar, Jacob Johnson, A. S. Duncan, J. A. Moore, Arthur Peter.

THE ORCHARD AND VINEYARD.

The past season has been one of extraordinary fruitfulness, particularly in the leading varieties of orchard fruits. There may have been a few limited localities where, from some cause, the fruit crop may not have been large, or it may have failed altogether; but in general the crop has been almost unparalleled. In many parts of the North and East apples have been so abundant that barrels could not be obtained in sufficient quantity to send them to market in.

The general success of the fruit crop will encourage many to renewed energy in planting orchards. With the present light before us, afforded by the various Fruit Growers' Associations, and Pomological Societies, by their annual and semi-annual reports, the public may be much better qualified to enter upon the work of preparing the ground, selecting the varieties best suited to various localities and climates, and the best mode of planting, than at any former period.

It is now generally understood, by all intelligent farmers, that the situation for an orchard, particularly in the South and West, should be the most elevated, and with a Northern aspect. It is also equally well known that the soil should be dry, and if not so naturally it should be made so by artificial draining. The various methods of doing this have been repeatedly described in these pages.

Then, in selecting the choicest and most productive kinds of fruit, the cultivator is no longer compelled to go, as it were blind-folded to work and plant an orchard ignorant of the adaptation of certain kinds to soil and climate, but the light that has been thrown upon this subject will enable any one to fill up his orchard without encumbering his ground with a single variety that will prove barren or unfruitful.

In the December number we published the list as corrected by the American Pomological Society at its last session. This list is adapted to a wide section of our country, though all the varieties named in the list adapted for "General Cultivation" will not be found suited to all soils and to all situations in our widely extended country, but this will answer as a very valuable guide, and may be modified for many situations by the reports of the various local societies. In the present number we publish the corrected list of the Kentucky Horticultural Society, which has been revised by an able committee during the past season under the examination of large collections of fruits received from various portions of the surrounding country. This list will serve as a guide to those who reside throughout a large portion of the Ohio and Mississippi valleys.

Many of our readers who contemplate planting orchards have failed to do the work, as they should have done during the past fall, but intend to give it their attention the coming Spring. To all such we will offer our advice, to lose no time in preparing the ground during any open weather in the winter. Let the plowing be deep and thorough, the holes regularly laid off; and unless the soil be light, rich, and mellow, dig the holes large and provide a cart-load of good soil to fill in each hole to the proper hight before the trees are set. Do not defer the planting until the buds begin to swell in the Spring, but plant as early in the season, as the condition of the ground will permit.

THE VINEYARD.

The same remarks in regard to varieties of fruit trees apply equally to grapes. There are a number of new grapes that experience proves to be superior to some of the old sorts for making wine, and it is probable that vineyards will be largely extended the coming Spring. Good land, with ordinary preparation, will produce fair crops for a few years, but to render a vineyard productive, and to the greatest extent profitable for a lifetime, deep and thorough trenching

should be resorted to. There is hardly any weather except rain and snow that will prevent this operation at any time in winter. Then labor can be procured cheap, and fifty dollars per acre expended in trenching will be more than repaid in the first five years after the vines come into bearing, and the subsequent years its advantages will be found still more apparent.

Grape Growing—Kelley's Island.

The history of grape growing in the United States affords some evidence of what the business is destined to become at no very remote period. The vicinity of Cincinnati, Ohio; Kelleys Island in Lake Erie, near Sandusky; and Hermann, Missouri, are the points where the culture of the vine has gained the greatest prominence. In the first named locality, land occupied by the vine is numbered by hundreds of acres. On Kelley's Island there are now under cultivation upwards of 230 acres; and at Hermann, where the business has been quite recently established, a less number of acres are under cultivation; yet, in all these localities, besides hundreds of others, the business is rapidly extending, and during the present winter a much larger number of acres of land will be prepared for Spring planting than in any former year.

The encouragement offered by the introduction of several new varieties of the grape will give a decided impetus to the planting of vines in the future. At the head of these new varieties stands the Delaware. The additional experience of the past season furnishes the strongest evidence of the great superiority of this grape over all others yet tested for the production of wine of the finest quality. Even Mr. Longworth, and others, whose prepossessions in favor of old established varieties created the strongest prejudice against the Delaware, have this season come out most enthusiastically in its favor, notwithstanding it has thus far stood the poorest chance of any variety that has been introduced, to show its true character, from the fact that no variety heretofore introduced has ever been so closely propagated. Indeed in all our travels through the vine districts we have not yet seen a single vine of the Delaware that had six feet of wood a few years old, the wood having been all employed for propagation. Under these circumstances the full capacity of this variety can not be developed, yet vines that have been permitted to attain some strength give evidence of the greatest fruitfulness. But our object at this time was more particularly to speak of the adaptation of Kelley's Island to the growth of the vine, and to offer some hints thereby suggested.

It is less than twenty years since the vine was accidentally introduced on the Island by Mr. Datus Kelley, one of the original proprietors of the Island, who procured a few cuttings of the Isabella grape and planted them. From this small beginning the culture has extended until nearly one-tenth of the Island is now occupied with the vine, 169 acres having been set in 1859 and '60. There are now sixty-two cultivators engaged in the business on the Island. The culture of the vine has succeeded in this locality better than in any other place it has been introduced, the vines growing with great luxuriance and productiveness, and free from disease. The cause of this success it may be well to look into, as affording profitable hints to those in less favored situations.

The ameliorating influences of large bodies of water upon the atmosphere, and consequently upon the growth of most kinds of fruits, are familiar to all intelligent fruit growers, and, perhaps, in no locality are these effects more distinctly marked than on Kelley's Island. But the soil of the Island, like that of all islands similarly formed and situated, performs a prominent part in securing the great advantages in vine growing at this place. This soil being *rich, light, and porous*, affords the most perfect natural *drainage*. These are the essential conditions combined with the modifying influences of the water, to render such a locality one of the most successful for fruit growing.

These facts, then, suggest to those engaged in vine growing (and the same applies equally to fruits of all kinds in less favored situations) that they should aim to bring about, by artificial means, as nearly as possible the same conditions. Where water is lacking let the vineyard (or orchard) be protected by planting belts of such evergreen and deciduous trees as will afford the greatest protection from the sudden changes of temperature and winds. We have seen the influence of this so distinctly marked in two adjoining fields that we are fully prepared to appreciate its benefits. Next, then, is the condition of the soil. Grapes (nor any other crop) can be successfully grown on a soil that is compact, wet, and consequently cold. The remedy, then, is to employ such means as will reduce the soil as near as possible to the condition of that of Kelley's Island (regarding that as the standard of perfection). This must be done, if wet, by under-draining, trenching and manuring. Thorough aeration of the soil for any cul-

tivated crop constitutes the great secret of success. We find that the heaviest crops of corn, as well as fruits, grow on light, sandy soils, provided the season affords sufficient moisture, or if the sub-soil be tolerably tenacious. And we have witnessed as beneficial effects from the trenching of light gravelly soils as we ever have in heavy soils. A well drained soil, rendered light and porous so as to admit of the free circulation of moisture, air and warmth, is essential to grape growing. Attempting to save labor in these respects is the poorest economy. It is far better to thoroughly prepare one acre, and bestow all the labor and care of culture on that, than to plant two acres half prepared. There are those of our readers whose experience fully convinces them of this, but there are many others about to engage in vine growing who do not so fully understand it.

The Death of the Evergreens.

The past unprecedented dry season has proved very fatal to all the kinds of evergreens; not only the newly planted ones, but many established evergreens have "gone by the board," at some period of the summer.

We have seen persons; who seemed puzzled to account for the fact that their trees had died, after making a good growth in spring, and when they thought them out of danger—and *that* notwithstanding they had been very careful and attentive, bestowed much time, labor, &c. in hauling a bucket of water every day to their favorites, in hopes of saving their lives.

We can perhaps throw some light on this matter; and, for the benefit of our readers, will at least try. It is well known that all plants take up their food from the soil in a liquid or diluted form, and that however rich the soil may be in the elements of plant life, without rains, or water, in some form, it cannot be made available for the use of plants; hence, if every particle of moisture has been appropriated by the plant, or dissipated by any other cause, and no fresh supply takes its place, the plant must die: and that has been the case this season. Hundreds of evergreens have died from sheer starvation. But it may be asked, Why an evergreen should die sooner than a deciduous tree, under like circumstances? We reply, that in our judgment the cause is this: The roots of an evergreen—that is, of all the coniferous kind—are confined to a smaller space, they do not travel as far in trees of equal dimensions as those of a deciduous tree. Their roots consist of masses of fibres, with their hundreds of mouths or feeders, closely packed together; whereas the deciduous tree sends out long, far reaching arms, and is more given to run down than the others; these main roots are furnished all along with smaller branching roots, and all these terminate with their bundles of fibres, containing spongioles or feeders. Consequently as an evergreen and deciduous tree, each requires the same amount of moisture and nutriment from the soil, and the roots of one spread over a diameter of eight feet, and the other only four, the supply must be exhausted in the latter first, and when completely exhausted the tree will die.

We have seen this process of starvation going on frequently this summer; and many persons applying water, do it without judgment or a knowledge of the demands of the tree, and the tree dies, even while under their hydropathic treatment. For instance, of what use would it be in cases like the above, to pour a little water on the surface of the soil, round and under the tree, daily, which in the arid condition of the atmosphere is soon evaporated and lost, without ever having reached the roots of the tree at all? Far better would it be to water once a week, and then give such a drenching that the water should sink down to the roots of the tree all around, and then apply a thick mulch to prevent its speedy evaporation. That is the only way to save an evergreen in such a condition. Large deciduous trees and shrubs, also, when growing near smaller evergreens, and especially newly planted ones, from their being so much more gross feeders, will rob the soil of every particle of the moisture it may contain, and will live and flourish; but will leave the poor little evergreen to starve and die. It must not be supposed that evergreens, generally, are not as hardy, or will not stand drought as well as the deciduous trees. They are equally hardy, and will stand drought equally as well; that is, they will live upon as little as the others, provided that little is within their reach; and they do travel good distances after their food, but not as deep and far as a general thing as the deciduous trees do. These facts are true of all trees, but apply more directly to newly planted trees, or to those but a few years set out.

In this connection it may be as well to remind our readers that spring is approaching, which is the best of all seasons to plant out evergreens, and that we seldom have so dry a summer, but that they will live and do well if lifted and planted aright. Now, however, is the best time to see the real beauty and grandeur of a grove of evergreens,

when all around is "brown and bare," and the chilling winds are sweeping over the bleak prairie. A snug cottage, embowered in evergreens, looks cheerful amid the desolation and gloom, like an oasis in the desert.

Root Pruning of Fruit Trees.

We have been requested to give some directions in regard to the mode and time of pruning the roots of fruit trees, in order to induce fruitfulness.

It is not very frequently the case among cultivators in our country, that fruit trees receive that degree of thorough cultivation and well prepared soil as to lead to that undue luxuriance which renders root pruning necessary. The more common error is the too great neglect. In well trenched and manured soils, and with corresponding after culture, we sometimes meet with pear trees that seem to expend all of their energies in the growth of wood for years without maturing a blossom. This habit, however, is confined to certain varieties, or rather there are certain varieties exempt from this fault, if such it may be termed, as for instance the Bartlett, Andrews, &c. Some of the varieties that generally require a longer period to bring them into a bearing state, when planted on good soil and with good culture continue to grow to a considerable size before they show a tendency to bear fruit. Perhaps, in the long run it would be more profitable to let nature take its course in these cases, for where a tree manifests such rapid growth it is evidence of a vigorous constitution, and if left to grow unchecked will produce a tree of large size, and when it comes into bearing will yield large crops of fair, sound fruit, for a long series of years, as is noticed in the cases to be met with in the old French settlements in Missouri, Indiana and Illinois. Some of these trees are a hundred and more years old and yet hale and vigorous, yielding annually large crops. Had these trees, on that rich soil, been forced into early fruitfulness, they would long since have exhausted themselves and passed away with premature decay. But in this fast age every cultivator is impatient to reap the immediate fruits of his labor, and hence they become anxious for the trees they plant to come into immediate bearing. It is the introduction of earlier fruiting kinds, upon poorly prepared soil, and the absence of proper cultivation, that, in our opinion, causes the early decline of our standard pear trees when compared with those of earlier times. The grafting of rapid growing kinds upon slow growing stocks, that is, the pear on the quince, the cherry on the Mahaleb' is resorted to in order to cause early fruitfulness. The small, closer pores of the stocks afford a less free circulation of the sap than is required by the more vigorous growth of the tops; have a tendency to produce fruit buds instead of leaf buds; and hence the trees are brought into early fruitfulness, which of course tends to shorten life and leads to more speedy decay. But this is not answering our friend's question.

When a tree, whether from any advantageous position it may chance to occupy, as it regards situation and soil, or from thorough cultivation, continues to grow without an evidence of fruit bearing, its vigorous habit may be checked by judicious root pruning and the tree brought at once into a fruit bearing condition, and health and fruitfulness may be continued for many years with proper care; yet it cannot be expected that the tree will attain the full age that it would otherwise, or that the aggregate production would be equal to that had the tree been permitted to grow to a larger size before its energies were checked in the production of fruit. Notwithstanding this, there are many instances where we would advise careful root pruning. This should be done by digging a trench all around the tree, say three or four feet from the body, and with a sharp spade cut off a portion of the larger roots leaving one or two on the sides from whence come the prevailing winds.

We have occasionally practiced this in the spring, but if done just after the most vigorous period of growth, say in July, the tree would, the same season, form fruit buds, and bear fruit the following season.

In case of a young peach orchard, on good land and under good cultivation, root pruning may frequently be resorted to, to good advantage, more particularly with a view to prevent prolonged growth in the fall and to cause the early maturity of the wood. In seasons when an early drought is followed by later rains it is well to check the over luxuriance of such trees by thrusting the spade through the roots at intervals of six or eight inches all around the tree.

NEW BORDERING FOR WALKS AND FLOWER BEDS.—It is the practice with some to define their garden walks by boards placed edgewise, and to use box, grass or some other slow growing plant for edging to flower beds. These generally are objectionable, especially when something better can be adopted. The boards (plank) are liable to decay, and grass or plants can not be kept easily within proper limits, while at the

same time weeds, &c., can not so easily be kept out of sight along them.

As a substitute for these, tile in various ornamental forms, have been introduced. The plan is an excellent one, and it only remains for those engaged in the manufacture of drain tile to profit by the hint and to furnish them to the country at large. They may be made of any ornamental design that may be suggested; or in plain flat pieces with the upper edge square; or it may be turned over leaving a semi-circular top as a finish. For garden walks this would be most appropriate; but for flower borders something more ornamental would please. The pieces may be made, say one inch thick and any width best adapted to the design of ornament adopted. They should set, perhaps, half their depth in the ground in order to give them sufficient stability. The plain pieces for ordinary garden walks and borders may be made as long as would be convenient—the longer, the more substantial and uniform they would be.

We hope the hint will be improved by drain tile makers, and let our seed and agricultural stores be supplied with a variety of these tile.

Calendar of Operations in the Vineyard.

Dear Readers of the Valley Farmer:—Some time ago, your and my respected friend, Mr. N. J. Colman, suggested to me the probable usefulness of monthly hints on the necessary operations in the vineyard. He also thought, that I would, perhaps, be able, to furnish them to the uninitiated, to those who have never planted or trained a grape vine, and had now that most laudable object in view. All true lovers of mankind and appreciators of Heaven's best gifts, ought, in my humble opinion, to be willing to contribute their mite towards advancing grape culture; and therefore I was, perhaps, too willing to enter into his views. But as we talk together, from month to month, through that true farmer's friend, the *Valley Farmer*, please bear in mind, that these hints are only for those who are making their first efforts in our glorious avocation, and not for those, who, to use a common phrase, "know all about it." For these latter, I do not write—I would rather learn from them; as I consider myself but a beginner, who has just come far enough to see how much he has to learn yet. Therefore, please excuse me from learned phrases and scientific palaver. I am a plain farmer, used to plain language only, and can only tell you such things as I have learned from a close observation of nature, such secrets, as my vines have whispered to me in our daily communion; for they do talk, and plainly, too, if the listener only understands the voice of nature. This I would advise you, gentle readers, to study. It is a language you must learn, if you will progress in grape culture, therefore, the sooner you begin, the better. It is a mute language, but will become plain enough if you only observe closely their habits, their wants, and their growth. But bring a true love of nature, and of all the glories of God's creation with you, and the task will be easy.

Now, gentle readers, I make my bow and this foaming bumper of pure grape juice I pledge to our better acquaintance. May the vines you intend to plant, grow, flourish and multiply. To help you, if ever so little in this task, shall be the earnest desire of, your humble servant,

G. Husmann.

JANUARY.

The ground for new vineyards may, if the weather permits, be cleared and prepared. This may be done by trenching with the spade to the depth of twenty inches to two feet, or where the soil is of a porous nature, with a good breaking plow, to the depth of one foot, following with the sub-soil plow, the deeper the better.—The ground will pulverize much better, and consequently will be in much better order for planting, if this is done before, or during winter, as the frost decomposes the soil.

Stakes, posts and laths for trellis may also be prepared. Posts ought to be about seven feet long, three inches thick and made of Cedar, Mulberry, White Oak, or any other durable timber; pointed on one end, so that they can be set with a crowbar.

If you have not the necessary plants, inquire, where you can get them, and order them to be sent early in Spring.

If you have older vines, this is a good time to prune them, during mild weather. We will suppose they have been loosened from the trellis before winter, as they ought to have been. If Catawba, or other heavy bearing kinds, prune to one spur of two buds or eyes, as low to the ground as you can get it, and one cane, if the vine is strong enough, of from eight to twenty eyes, according to the strength of your vine.—Choose for this cane, if you have any choice, one which commences at about twelve to eighteen inches from the ground, and has firm medium sized, well ripened wood of last year's growth. Cut off all old bearing wood close above this cane, and trim off all weak side branches. All well ripened wood of last Summer's growth can be cut into cuttings. They are cut about eighteen inches long, tied in bundles, and buried in the ground until Spring, or kept in a moist cellar. If your vines were planted the year before, they should be cut back to one or two eyes, according to their strength.

Norton's Virginia, and other strong growing kinds, may be pruned much longer; an old, strong vine can be pruned to two or three and even four canes, according to the strength of the vine.

This is also an excellent time, if the ground has been washed away by rains in old vineyards, to haul soil into them. Surface soil, decomposed clay, leaf mould and spent tan, saw-dust, etc. are all good, separately, but better, if mixed.—Give them plenty of soil, as a top dressing, and they will need no manure. Haul it to the end of your vineyard with a wagon, and wheel it in between the vines with a wheel-barrow.

[Written for the Valley Farmer.]

Monthly Notes for the Garden and Orchard.

BY CAREW SANDERS.

Seed time and harvest for the year 1860 have come and gone. The question of profit or loss, whether in farm or garden, is once more settled; for the labors of the past are all performed, the crops all harvested, and if not all marketed or used, an estimate can be formed of their value, so that the practical question of how has it paid, can be determined.

But is there nothing we can do, in or for the garden, this first month of the new year? Because winter has drawn around us his icy embrace, must we sit down with our hands folded in inglorious ease and contemplate the scene? Did our systems and methods of cultivation reach perfection the past season? Can no improvements be suggested or effected on the past? Are our gardens perfect in their formation, neatly and substantially fenced all around, drained, sub-soiled, manured, and all permanent crops planted? Are our door-yards or ornamental grounds finished, too; graded, well set in grass, and judiciously planted with shade trees, shrubs and flowers; all necessary paths well made, and all with an eye to beauty, comfort and utility? Until all these things are accomplished, there is much work both for the head and the hands to do, even though the ground should be covered with snow, and winter reign supreme.

Of all the months in the year, the present one is the best (because of the most leisure time from out-door labor) to prepare plans for the future, to procure and study works on the subject of gardening, to learn what to do to attain a certain end, and then to think out and calculate wants and means, and so lay out and prepare a fixed and determined plan of action for the future, to be ready for execution the moment the first opportunity offers. But what should constitute the wants of every farmer's family, and every family which owns or occupies the soil, that should be drawn from the garden and orchard?

In the domestic economy of the household—in the interests of health, and even luxury—in the profits it affords, indirectly, if not directly—in all that pertains to the welfare and happiness of the family, an abundant supply should be had of green and succulent esculents and roots, at all seasons; all the hardy small fruits in their seasons, enough for present use and plenty to preserve; and a certain provision in the future for a good supply of the larger fruits—pears, apples, &c.

Again, a certain portion of ground round about the house should be devoted to ornamental purposes. Trees of various kinds, as well as being pleasing and instructive in all their varied and beautiful forms of branch and spray, of shape and hue, are a source of luxury and pleasure for the grateful and delicious shade they afford from the sultry summer heats. So also do grass and flowers contribute largely to the comforts, the luxuries, and especially to the refinements and pleasures of the farmer's home circle. It should not be considered a waste of ground and time to devote some skill, pains and labor annually on this department of the farm surroundings. But to accomplish all this economically and wisely, some knowledge and acquaintance with the details of the work are demanded, and this we advise every farmer and lot holder to set about procuring at once; the present is the very best time to begin, so as to be ready to put in practice the lessons learnt with the very beginning of the working season.

To assist in accomplishing this, we would earnestly recommend all those who wish to set about it, to procure a work called "Country Life," by R. Morris Copeland, or the several volumes of "Rural Affairs," by John J. Thomas, both of which works are admirably adapted to this purpose, as giving plain, explicit and practical suggestions for the formation and management of small gardens and ornamental grounds, just such as are suited to the wants and means of the farmer—from the large and wealthy planter, to the small, struggling, but honest, hard working beginner. The limits of a single article, or hardly a dozen articles, would suffice to give a comprehensive and detailed plan of how to proceed with such a work from beginning to end, hence we recommend the above books.

If any alterations or improvements are to be made in gardens already formed, or new gardens are to be made, the plans can be elaborated now, to be executed at another time. In the case of new gardens or lawns there is now more time to study, reflect and view the ground, the surroundings, the needs and wants of the place; the points where shelter is needed, and what is best to plant to effect it; the objects to conceal by planting; the views to be opened; the grading of the ground; a hillock to be lowered here, a depression to be raised there; a pleasing, harmonious, flowing surface to be created, that shall be at once graceful in its outlines as the gently undulating waves of the ocean.

Then, again, you can locate each and all of the objects to be placed on the grounds, the paths, the fences or boundaries. A group here of tall deciduous trees, of evergreens there, masses of shrubs and flower-beds elsewhere, and so on through the whole work.

These remarks are not intended as directions how to proceed in such a work, but simply to point out some of the advantages to be expected from a well managed garden, and to prove an incentive to some or all of our readers to do better; to urge them for their own sake and the sake of their families to adopt our plan and enjoy the numerous blessings that will flow from such a source; to commence anew, and with a determination to have all these advantages, which are so easily attainable, if only set about aright.

It is the unanimous testimony of all who have enjoyed these things that, to do without them, they could not be happy and contented again.

WINTER WORK IN THE GARDEN.

In January, in our latitude and south of us, we often have mild open spells of weather, and various kinds of ground work may often be done to advantage: such as fencing, ditch-

ing, trenching or sub-soiling. Manures may be hauled out on the ground in dry frosty weather. Tools and hot-bed sash may be repaired in-doors, and much other work of a practical nature may often be done, preparatory to spring work. And it should be borne in mind that everything that is done now, is worth twice as much as if left till spring, as that season always brings with it abundant labors, and often more than can be got through with in season: and work that might be done in winter, is often left undone if left till spring—hence, the value and importance of taking advantage of every opportunity during winter; besides the additional value of exposing the soil to the action of the frost, draining off surface water, &c.

These items may seem like old repetitions: but they will bear it.

PLANTS IN BLOOM.

We propose during the ensuing year, to give the names of the various kinds of trees, shrubs and flowers, as they come into bloom in their respective seasons, and to make running comments or remarks concerning the most worthy of them; as to their period of commencing to bloom, their color, habits and characteristics, and their relative merits or desirability as ornamental plants, &c. Also the periods of blooming and ripening of different fruits that may come under our observation, to serve as notes of reference and comparison between this and other localities, this and other years, and to enable some of our readers to identify some of their unknown beauties; others to endorse or differ with our opinions of their merits, &c., and to serve as a sort of guide to those who do not know the various kinds of plants, or which are the most desirable for them to purchase for their hardiness, beauty, or other peculiar and striking qualities.

January being a decidedly wintery month, does not afford us any flowers in the open air, so we shall name a few of the more prominent greenhouse and window plants, which are essentially winter flowering:

And first on the list of these is the Camelia Japonica, or Japan Rose, commonly called the Japonica. This is one of our very finest exotics, and is a woody shrub or small tree, with broad, deep green, very glossy and beautiful foliage; flowers large and shaped like a rose; double and single; colors pure white to deep red, and all intermediate tints and stripes, with a soft satiny or waxy covering of the petals which renders them exceedingly beautiful. This is the great favorite flower in all the large cities with the ladies, for making boquets, wearing in the hair, &c. for which it is highly esteemed. It is, as its name implies, a native of Japan, and of course a wild, hardy plant there. It is also hardy south of 30° here, and blooms in the open air, or with very slight protection, and is an object of great beauty.

Lauristinus is a pretty evergreen shrub, with heads or panicles of pretty white flowers that bloom naturally at this season of the year in the greenhouse here, but in England where it is hardy it is in full bloom about Christmas and New Year in the open air.

The Chinese Primrose is another winter blooming plant, dwarf and herbaceous, with white and purple flowers, very pleasing and pretty.

The Linum Trygynum, a very old or long known greenhouse plant, also blooms at this season; a shrubby plant, having bright, yellow, salver-shaped blossoms, very showy, but of no account for boquets.

Several varieties of Tropeolum or Nasturtion bloom freely at this season, having both scarlet and yellow flowers; also the Abutilon Venustum and Insignis, with bell shaped, reddish flowers and veins of a darker hue.

These, however, are but a few of the plants that are had in bloom in the greenhouse in the winter; the art or skill of the gardener brings many varieties into full bloom, whose natural period of blooming belongs to the other seasons. Our object is to call attention to the hardy out-of-door plants, chiefly with their period of blooming, and we only mention these as blooming naturally at this season in their native country or wherever they are hardy.

Meramec Horticultural Society.

SCHOOL HOUSE, ALLENTON, 8th December, 1860.

The twenty-fourth monthly meeting of the Meramec Horticultural Society was held as above; the President, Dr. A. W. McPherson in the chair.

The report of the Library Committee was received; slightly amended and adopted, and upon motion committed to the Executive Committee for immediate action.

Two new members were admitted. The Secretary read a communication from the Agricultural Department of the Patent Office, presenting the Society with ten copies of the Report for 1859.

Several of the members expressed their thanks for this k'ndness on the part of the Department and their high appreciation of the labors of this Bureau in behalf of Agriculture, and especially for their manifest interest in grape culture.

On motion, the appropriate resolutions were adopted, expressing the loss to the Society and community by the death of their fellow member, John C. Blakey.

On motion, RESOLVED, that the Society send the following ten delegates to the Farmers' Convention to meet in Jefferson City on the third of January next: Dr. J. B. H. Beale, Dr. L. D. Morse, Dr. A. W. McPherson, Messrs. T. R. Allen, C. Paffrath, Wm. Harris, Wm. Muir, W. Williams, L. D. Votaw and N. J. Colman.

The annual election of Officers being in order, President McPherson declined a re-election, and the following list of Officers were elected by ballot:

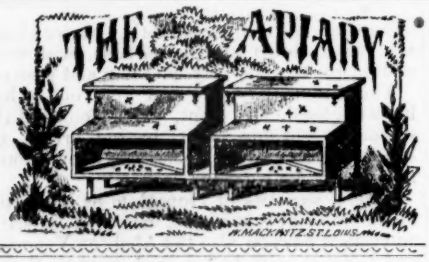
President, Dr. L. D. Morse, Allenton. Vice-Presidents, Dr. J. B. H. Beale, Eureka, Chas. Paffrath, Sunhill, Melrose. Recording Secretary, Wm. Muir, Laborville, Melrose P. O. Corresponding Secretary, T. R. Allen, Allenton. Treasurer, Wm. Harris, Allenton. Executive Committee, T. R. Allen, A. W. McPherson, L. D. Votaw. Librarian, T. R. Allen, Allenton.

On motion, RESOLVED, that the Constitution be construed to mean, in relation to Members' Dues, as follows, to wit: That when a member joins the Society he pays one dollar as an Initiation Fee, and that his dues are annually thereafter one dollar for each fiscal year, beginning in Dec. at the annual meeting.

The Executive Committee reported the following subject for the next meeting, which was adopted: "The importance of a strict and correct account of the operations of the Farm."

The Chairman then announced the next meeting to take place at the School House, Allenton, on the second Saturday of January, at 10 A. M.

WM. MUIR, Secretary.



[Written for the Valley Farmer.]

HINTS FOR THE MONTH.

BY J. W. QUINBY.

Bees require some care every month in the year, but as little perhaps in the month of January as in any other. See that rats and mice do not get in and destroy the combs. These vermin sometimes make great havoc. Set traps for them—perhaps it is not best to use poison, as they might by chance carry it to the hives. If the bees are out of doors, see that the passages in the hive do not become filled with dead bees and ice. Good ventilation and pure air are necessary. As said last month, they will not smother under a snow-bank—neither will the mice, a fact which it is well to remember. If a light snow—so light that a bee would sink in it—should happen to be followed by a day warm enough to entice the bees into the open air, the hives ought to be shaded. If a bee does not sink in the snow, she can generally rise after lighting upon it, but if she does, she is almost sure to die; when the snow is crusted, little danger need be apprehended. If bees are wintered in the house, a little slaked lime, scattered on the floor of the apartment, may serve to keep the air pure and sweet. If by any chance light stocks get out of honey during the winter, they may be fed strained honey or a syrup of sugar (mentioned in a former article) by pouring a small quantity at a time on a piece of comb laid flatwise on the combs in the hive—the hive being inverted as directed last month. Candy answers a very good purpose. That which is without a grain, smooth and glossy, is probably best. It will pay sometimes to winter light stocks by regular feeding; but I think it better to unite such in the fall. The bees will consume about as many pounds of candy as they would of honey.

In the winter there is generally time to provide hives, boxes, covers, stands, &c., and perhaps I can occupy my remaining space to the best advantage by giving some more minute directions for making these than I have had opportunity to do before. I recommend no bee-house. Let each hive have a stand of its own. This method allows you to place them at proper distances from each other, and there is no temptation to crowd them such as one feels when he has built a bee-house at some expense, and is anxious to get as many into it as possible. Take good inch boards—thicker would be better—and, by joining them if narrow, and nailing them to strong cleats two or three inches square, make separate bottom-boards, large enough to project an inch or two on the sides of the hive, and twelve or fourteen inches in front. A stand made in this way will raise the hive far enough from the ground. Some say differently, but experience does not bear them out. Besides, many bees will be saved by this arrangement, that, were the hive elevated, would be dashed down by heavy winds, and lost. Of course, weeds and grass must be kept down. Separate stands are better than one long bench for the reason that the bees cannot run from one to the other. This is quite important in the swarming season. As to the hive, let it be made of good seasoned lumber free from checks and shakes. Pine is the best we have in this section. Basswood is to much inclined to warp. Size of hive and painting have already been spoken of. Let the top piece be rabbeted around its edge, half an inch deep, so that a wooden cover of the proper size may exactly fit into it, and thus effectually exclude the light and rain. This cover should be made large enough to slip easily over the glass boxes which it is designed to protect. More particular directions for making these boxes will be given next month. If the cover does not make them dark the bees will be likely to besmear the glass with propolis or wax. We now come to the roof which is quite important. I make this by getting out two pieces of inch board, eighteen inches long and three inches wide in the middle, sloping down to three-fourths of an inch at each end, and nailing thin boards on these so as to make a roof resembling that of a house. It should be long enough and wide enough to shade the hive in the middle of the day. Sections of bark, peeled from logs, may serve a transient purpose in place of roofs, but they do not last long enough to be profitable.

ST. JOHNSVILLE, 1861.

[Written for the Valley Farmer.]

The New System of Bee Keeping.

Amidst the progressive industry of the day, bee-culture is now having its share of attention. Old systems of management, and old notions respecting the natural habits of the honey bee—resting solely upon conjecture—are now being given up as fast as information can be disseminated among the people. In Prussia the art of bee-culture is taught in the schools of some districts, and the subject is deemed by statesmen to be of great and growing importance to the whole country.

The main features of the bee-culture of this country is NEGLECT. Bees are kept in old boxes, new boxes, barrels, or anything that is convenient at the time of hiving. Hives are made in the rudest manner—no regard to mechanical nicety—joints open, affording a safe harbor for insects, and requiring half of the time of the swarms to fill up the openings with propolis, so as to make the interior of the hive comparatively safe from the intrusion of moths, ants and spiders. Then they are placed on level benches, and all the old pieces of boards about the premises are collected here, among which all manner of insects find a fitting place for their breeding operations.

The new system of keeping bees proceeds upon the sensible belief, that the honey bee is worth cultivating and being cared for; that it pays a higher profit in proportion to the expense involved than any other kind of live stock. One swarm, or twenty swarms of bees will double annually, and afford, one year with another, five dollars worth of honey each. Here is at least ten dollars for every swarm which the bee-keeper starts with in the spring; and this, in any good locality, may be calculated upon with as much certainty as a profit from any other kind of production.

The peculiarity and great advantage of the new system of bee-culture is this: It gives you entire control of the combs. The combs are made by the bees within small frames which hang in the hive, much as our old mothers used to hang their rods of candles when "dipping," between the posts of the kitchen chairs. These frames of comb are not attached to the hive at all, but are entirely separate—the bees passing all around them when suspended in the hive, and they can at any time be taken out with the bees adhering. They can be moved from one hive to another; they can be examined for the queen-bee, or for the moth, if that disgusting insect obtains a lodgment in them. When comb becomes thick, black, or from any cause unfit for breeding purposes, it can be cut out and the bees allowed to make new. This hive was first invented by the Rev. L. L. Langstroth, and though there are now several different hives in circulation, made upon the movable-comb principle, yet none equal the original in cheapness or ease of construction, or afford so great facilities for the convenient

removal of the combs and the ease of general management of the swarms.

We are well aware that old bee-keepers will poh at the idea of taking out the combs from a hive when they are covered with bees, and replacing them without being stung or enraging the bees; and we know that in many cases only the actual sight of the experiment will convince them that it can be done. But by having the control of the combs, every thinking bee-keeper will soon see what he can do with his swarms. As we would like to give the reader, unacquainted with this system, a clear idea of it, it will be allowable to give a little of our own experience:

Last spring ten swarms were taken from box hives and transferred to the Langstroth hive, by cutting out the combs and fitting all that were suitable into the frames above spoken of. They were opened from time to time—the frames with comb and bees lifted out—and were found to be prospering finely. In July two swarms were discovered to be idle, or crawling listlessly about the front of the hive. On examination they were found to be destitute of a queen—both of them—there being neither eggs nor young bees in the combs; consequently the swarms had no means of rearing a new queen. Well the remedy was at hand and very simple and beautiful. Two other hives were opened which contained a healthy queen, a frame of comb was taken from each—full of eggs and larvæ—and exchanged for two combs from the queenless hives. This gave the latter the means of raising a new queen—which they can do from any of the eggs in the worker cells. The time required is about two weeks. From some cause one of these colonies failed to raise a queen from the eggs thus supplied, while the other succeeded; so a second trial was necessary. The comb which was first taken from this hive was now returned to it filled with eggs—and this time success crowned their efforts. They are now among our strongest colonies. In the old hives the loss of these two swarms would have been inevitable.

Another swarm became infested with the moth; the frames were lifted out, bees brushed off, and each comb carefully examined, and all the worms picked out. This process was repeated three times in as many weeks and thus completely rid them of this destroying insect.

There are many other advantages which the movable-comb principle affords quite as important as the foregoing which must he noticed hereafter. B.

Domestic Department.

CORNED BEEF.—Who is not fond of good corned beef? Understand me, I mean a good article, well cooked; I do not mean a poor article half cooked. Those who answer in the negative I am sure never had the good fortune to taste of this mainspring of human nourishment. Talk about your beef-steak and fried sausage, or any other kind of fried meats, they all sink into insignificance when compared with well-cooked corned beef.

There are, however, two or three things to be done in order to procure this great luxury of the table. In the first place, then, do not get your meat too salt, it makes it too tough and tasteless. Do not allow it to remain over two weeks in the first brine, for it takes up all the blood that was in the meat, and consequently ought to be drained off, as the meat will be much more likely to be injured than it will when separated and replaced with fresh made brine, but more especially in warm weather. In this way it will keep with just sufficient salt to season it.

In the second place, the cooking is of just as much importance as the corning; it should be boiled at least four hours, or until it can be cut and eaten as readily as a piece of soft bread. Not one-half of the domestics cook their meat long enough. Try it once, and you will see the difference. Meat prepared in this way can be eaten with a relish and is easily digested, giving nourishment and strength to the body.

But fried meats, or meats half cooked, cannot be properly masticated or prepared for the action of the stomach, and are among the most indigestible articles of nourishment. Some persons are always in too much of a hurry or too lazy to chew their food, thereby favoring their teeth and throwing the responsibility upon the stomach.

Frequent abuses of this important organ develop disease, and the individual is said to have dispepsia with all its attendant evils. Therefore spare not the cooking, you will have the loss chewing, and the full advantage of the food.

RECIPE—To every hundred pounds of beef take of salt 5 lbs., saltpetre ¼ oz., sugar 1 lb. Dissolve in sufficient water to cover the meat.

TO PREVENT SKIPPERS IN HAMS.—In a communica- to the "Cotton Planter," Mr. W. McWillie says:—"There is, according to my experience, nothing easier than to avoid the skipper and all worms and bugs that usually infest and often destroy so much bacon. It is simply to keep your smoke-house dark, and the moth that deposits the egg will never enter it. For the past twenty-five years I have attended to this, and never have had my bacon troubled with any insect. I have now hanging in my smoke-house hams one, two and three years old, and the oldest are as free from insects as when first hung up. I am not aware of other causes for the exemption of my bacon from insects, but simply the fact that my smoke-house is always kept dark. Before adopting this plan, I had tried many experiments, but always either without success or with injury to the flavor of my bacon. I smoke with green hickery—this is important, as the flavor of bacon is often utterly destroyed by smoking it with improper wood.

A STUFFING FOR BAKED FISH.—Use one-third finely chopped salt pork to two-thirds bread crumbs, or cracker, and half a great spoonful of chopped onions; season with salt, pepper and chopped parsley. Mix with an egg; stuff the belly, and sew it up. Cover the outside of the fish with beaten egg, and roll it in bread crumbs in which a little Cayenne pepper has been sprinkled.

Lay in the bottom of the dish four or five narrow strips of pork half an inch wide by three inches long; place the fish on these, and strew the same on the top, basting it with a table-spoonful of butter which has been warmed in half a gill of good vinegar.

Thirty to thirty-five minutes will cook it.

Serve the fish without the gravy in the dish; and the dripping in the cooking-pan, thicken with a teaspoonful of flour, add a gill of water, let it boil, and, if liked, put in two teaspoonsful of catsup. Do not cut off the heads of the fish that are to be baked.

TO MAKE RUSK.—Take ½ pint of milk, 3 eggs, 1 large tablespoonful of butter, 2 tablespoonsful of sugar, ½ a cup of yeast: mix as batter, (not too thin,) set in the sun until light, then knead into a loaf, pull off pieces of equal size, roll in the hands, put them in an oven close together, let them raise, and when they have done so, wash them over with egg and sugar. Bake quick.—"[Southern Cultivator."

BAKED APPLE DUMPLINGS.—Boil one pound and a half of good apples with a gill of water, and half a pound of brown sugar, until reduced to a smooth pulp; stir in one gill of sweet cream, a tablespoonful of flour or fine bread crumbs; flavor with a little lemon juice, or grated lemon, and bake forty minutes.

HOE CAKE.—This cake, so popular in the South as a breakfast and tea cake, is made in the following way: Scald a quart of Indian meal with a pint of water; stir in two teaspoonsful of salt and a little melted butter; put it, when properly mixed, into a well-greased tin, and bake it half an hour.

POVERTY A BLESSING.

The great struggle for riches among mankind is a very mistaken effort to acquire either happiness or fame. Few children born to riches ever make a prominent mark in the world. Almost all great and learned men acquire their greatness or learning through extreme difficulties resulting from poverty. We find the following over the signature of *Timothy Titcomb*, so full of truth and so appropriate, that we transfer it to the *Home Circle:*

"If there is any thing in the world that a young man should be more grateful for than another, it is the poverty which necessitates his starting in life under great disadvantages. Poverty is one of the best tests of human quality in existence. A triumph over it is like graduating with honor from West Point. It demonstrates stuff and stamina. It is a certificate of worthy labor faithfully performed. A young man who cannot stand this test is not good for anything. He can never rise above a drudge or a pauper. A young man who cannot feel his will harden as the yoke of poverty presses upon him, and his pluck rise with every difficulty that poverty throws in his way, may as well retire into some corner and hide himself. Poverty saves a thousand times more than it ruins; for it only ruins those who are not particularly worth saving, while it saves multitudes of those whom wealth would have ruined. If any young man who reads this letter is so unfortunate as to be rich, I give him my pity. I pity you my rich young friend, because you are in danger. You lack one great stimulus to effort and excellence, which your poor companions possess. You will be very apt, if you have a soft spot in your head, to think yourself above them, and that sort of thing makes you mean, and injures you. With full pockets and full stomach, and good linen and broadcloth on your back, your heart and soul plethoric, —in the race of life you will find yourself surpassed by all the poor boys around you, before you know it.

"No, my boy, if you are poor, thank God and take courage; for he intends to give you a chance to make something of yourself. If you had plenty of money, ten chances to one it would spoil you for all useful purposes. Do you lack education? Have you been cut short of the text books? Remember that education, like some other things, does not consist in the multitude of things a man possesses. What can you do? That is the question that settles the business for you? Do you know your business? Do you know men and how to deal with them? Has your mind, by any means whatsoever received that discipline which gives to it action, power and facility? If so, then you are more a man, and a thousand times better educated, than the fellow who graduates from a college with his brains full of stuff that he cannot apply to the practical business of life—stuff, the acquisition of which has been in no sense a disciplinary process, so far as he is concerned. There are very few men in this world less than thirty years of age, and unmarried, who can afford to be rich. One of the greatest benefits to be reaped from great financial disasters, is the saving of a large crop of young men."

Mammoth Cave of Missouri.

We have been furnished the following description of a large cave within eight miles of Rolla, the county seat of Phelps county, Missouri. In front of the entrance was a small stone house, which the old settlers thought was built by the Indians, but is now in ruins.

The entrance goes straight in the rock, on a level with the surrounding surface rock, is about one hundred feet wide, and in the centre, about twenty-five feet high, arched. Messrs. Freid and Prewitt entered the cave for about four hundred feet, where it narrows to about twenty-five feet wide by fifteen high, and presents the appearance of an ante-chamber; from there they passed into another chamber about one hundred feet in height, where three gallaries branch off. They then passed into the left gallery, which ascends near twenty feet on a bed of saltpetre. This is called the Dry Gallery, and is about five hundred feet in length; the height varies from one hundred to thirty feet. The ceiling and sides are composed of solid rock. Near the end is a large round chamber, which Mr. Prewitt calls the Ball Room, and that gentleman states that his father had given balls in the chamber frequently; the last was in the winter of 1850, at which time there were eighteen or twenty persons there. They went in the morning and stopped all day, and arrived at home in the evening; cooking and eating their meals in their subterranean saloon, and had a merry time of it.

After exploring this chamber they retraced their steps and passed into the right branch of the cave, where they ascended a rise of about twelve feet and entered another gallery, the end of which is not known. They, however, explored it about three quarters of a mile.

Mr. Prewitt states that he has been in this gallery over two miles and did not get to the end of it. In this gallery the dropping of the water has formed stalactites of the most beautiful conception—statues of men and animals and large columns, supporting the most beautiful arches, form the ceiling, which is from fifty to one hundred feet high, which form several chambers of various sizes. The ceiling is decorated with different groups of spar, forming a variety of figures, which represent the inside of a cathedral. The size of

these chambers is about forty feet wide by one hundred feet high, and look like rooms in some old feudal castle. They were afraid their lights would give out, and therefore retraced their steps to the main chamber,from which they ascended the main gallery, where a large stream of clear water issues from the interior of the cave, and has a fall of about six feet, and falls in several round marble basins. The water flows all the year round without variation, in sufficient volume to drive a mill.

They ascended the galleries, and found themselves in several beautiful chambers, leading from one to the other, in which, however, they did not penetrate more than six hundred feet. There is a strong draft of air setting in from the entrance; inside of the cave the atmosphere was mild.

The chambers are all of unusual height and extent.

They went in at one o'clock and emerged from the cave at half past three.

Take it all in all, it is a most wonderful place, and must prove an object of attraction to all fond of viewing nature in her curious and stupendous works.—[*Ex.*

Winter Rules.

Never go to bed with cold or damp feet.

In going into colder air, keep the mouth resolutely closed, that by compelling the air to pass circuitously through the nose and head, it may become warm before it reaches the lungs, and thus prevent those shocks and sudden chills, which frequently end in pleurisy, pneumonia, and other serious forms of disease.

Never sleep with the head in the draft of an open door or window.

Let more covering be on the lower limbs than on the body. Have an extra covering within easy reach in case of a sudden and great change of weather in the night.

Never stand still a moment out of doors, especially on street corners, after having walked even a short distance.

Never ride near the open window of a vehicle, for a single half minute, especially if it has been preceded by a walk, valuable lives have thus been lost, or good health prematurely destroyed.

Never put on new boots or shoes in beginning a journey.

Never wear India rubbers in cold, dry weather.

If compelled to face a cold, bitter wind, throw a silk handkerchief over the face, its agency is wonderful in modifying the cold.

Those who are easily chilled in going out of doors, should have some cotton batting attached to the vest or other garment, so as to protect the space between the shoulder-blades behind, the lungs being attached to the body at that point, a little there is worth five times the amount over the chest in front.

Never sit for more than a moment at a time with the back against a fire or stove.

Avoid sitting against cushions in the backs of pews in churches, if the uncovered board feels cold, sit erect without touching it.

Never begin a journey until breakfast has been eaten.

After speaking, singing or preaching in a warm room in winter, do not leave it for at least ten minutes, and even then close the mouth, put on the gloves, wrap up the neck, and put on your cloak or overcoat before passing out of the door; the neglect of these has laid many a good and useful man in a premature grave.

Never speak under a hoarseness, especially if it requires an effort, or gives a hurting or painful feeling, for it often results in a permanent loss of voice, or a long life of invalidism.—[*Hall's Journal of Health.*

Eighteen things which render young people very impolite:

1. Loud laughter.
2. Reading when others are talking.
3. Cutting finger nails in company.
4. Leaving church before it is closed.
5. Whispering in church.
6. Gazing at strangers.
7. Leaving a stranger without a seat.
8. A want of reverence for superiors.
9. Reading aloud in company without being asked.
10. Receiving a present without some manifestation of gratitude.
11. Making yourself the topic of conversation.
12. Laughing at the mistakes of others.
13. Joking others in company.
14. Correcting older persons than yourself, especially parents.
15. To commence talking before others are through.
16. Answering questions when put to others.
17. Commencing to eat as soon as you get to the table.
18. In not listening to what one is saying in company—unless you desire to show contempt for the speaker. A well-bred person will not make an observation whilst another of the company is addressing himself to it.

LIVE FOR SOMETHING.

Live for something, be not idle—
  Look about thee for employ!
Sit not down to useless dreaming—
  Labor is the sweetest joy.
Folded hands are ever weary,
  Selfish hearts are never gay,
Life for thee hath many duties—
  Active be, then, while you may.

Scatter blessings in thy pathway!
  Gentle words and cheering smiles,
Better are than Gold and Silver,
  With their grief dispelling wiles.
As the pleasant sunshine falleth,
  Ever on the grateful earth,
So let sympathy and kindness
  Gladden well the darkened hearth.

Hearts there are oppressed and weary;
  Drop the tear of sympathy,
Whisper words of hope and comfort;
  Give, and thy reward shall be
Joy unto thy soul returning,
  From this perfect fountain head;
Freely, as thou freely givest,
  Shall the grateful light be shed.

Editor's Table.

Our Prospects.

We have been agreeably disappointed in receiving so large a number of renewals up to the time of going to press with the January number. Letters containing "good cheer," as well as the "needful," have been pouring upon us in a perfect flood. We feared the deranged state of the country might deter some from promptly renewing, but in this we were mistaken. The truth is, while other branches of business may be affected by such panics as we are now suffering, the Agriculturist is comparatively safe from their injurious effects. The people must be fed—there are as many hungry mouths, now, as there ever were, and they can only be filled by the agriculturist. There is, therefore, just as much need for a good agricultural journal as there ever was, just as much necessity for good farming; and the prompt renewals of subscriptions afford a happy evidence that farmers are less affected than other professions by our unhappy times. We thank, you, friends, one and all, for your kind words, your generous support, and your encouraging promises. It is a pleasure to labor for such a noble band of true friends as we have. From present indications our list of subscribers for 1861 will be a large increase over that of former years.

We mail this number to some of our readers whose subscriptions have not yet been received, owing, in many cases, doubtless, to the tardiness of the mails. As all who wish the FARMER continued can remit before mailing the next number; we shall send it only to those who have renewed.

To All Whom it May Concern.

We send the January number to many who have not yet renewed, to be used as a specimen for procuring subscribers. All who receive this number may consider themselves duly authorized to act for us in procuring subscriptions. We desire that one and all should feel that they have an interest in the VALLEY FARMER—that it is their Journal, and that, consequently, they ought to work for it. Every additional subscriber gives us the power to make it a better Journal—the larger its patronage, the better it shall be. So, friends, send in your names at once. Recollect that this is the last number that will be sent to any who have not renewed. Send now and you will obtain the volume complete.

Read This.

THE HOME AND SCHOOL JOURNAL, devoted to Education, Art, Science, Literature, &c., is published by NORMAN J. COLMAN, of St. Louis, at One Dollar per annum. It is expressly designed to supply a sound healthy literature to Western readers. Fathers and mothers, young men and young women, boys and girls, will find it abounding in instruction and interest, and worth far more than all the trashy novels and magazines, filled as they are with tales of love and murder, hair-breadth escapes, &c. Subscribe for the HOME AND SCHOOL JOURNAL, and it will furnish you with good food for mental digestion for yourself and family. THE HOME AND SCHOOL JOURNAL and the VALLEY FARMER will be sent to any address for only One Dollar and Fifty Cents. At these remarkably low rates we ought to have ten thousand subscribers. Reader, try both journals.

Our Premiums.

Read them over again carefully. Would you not like that splendid Manny Reaper and Mower, or one of those excellent Sewing Machines? Are not such premiums worthy of some effort? You, sir, can get one of these premiums if you will earnestly try. It will cost you only a little time that might be worse occupied than in obtaining readers for such a Journal as the VALLEY FARMER. If the gentlemen are going to be so indifferent about it, we hope some of our fair readers will take the matter in hand. A lady of resolute will and a little effort could easily obtain one of these fine Sewing Machines, which would last her a lifetime, and save her a world of labor. Who of our readers will make the trial? Now is the time to begin.

Recollect that one NEW subscriber will be equal to two old ones—therefore keep a sharp lookout for the NEW subscribers.

Form Clubs.

From every post-office—yes, from every neighborhood—we should receive a club of six, ten, fifteen or more. Who are the philanthrophic men who will attend to getting up these clubs? Every neighborhood has its men who delight in being useful to their fellow citizens. Upon such we call to form clubs the first opportunity, and to roll up such lists as will make the eye sparkle to read them.

A Free Copy.

1st. Any one who will send us Three NEW Subscribers and Three Dollars, shall receive a fourth copy for 1861 FREE.

2nd. Any one who will send us Ten Subscribers, new or old, at eighty cents each, shall receive a copy FREE for 1861. This offer is only made for the present year. Can our friends ask us to be more liberal.

What You Can Do!

Our patrons speak in high terms of the FARMER, and promise to increase its circulation. With our large list of readers, and with a united effort on their part, our circulation could easily be made to reach 50,000 for 1861. We do not believe we have a single reader who could not send us one or two subscribers with a very little effort. There are others who can send from five to twenty. Now, if every one who reads this will determine to do the best he can, and go to work resolutely to do it, the desired number will be obtained. Will you, Sir, who read this, enlist yourself in behalf of the farmers' true friend—the VALLEY FARMER. There are neighbors A and B and C who would take it on your recommendation; persuade them to join you. Then there are court days, and public sales, when large clubs could be obtained.—Whenever there are public gatherings much can be done for the FARMER if there is one to try. We ask all to do what they can, if they think the FARMER will benefit those who take it. Aid us at least in doubling our list. One new subscriber from every patron will do this.

☞Subscribers will be very particular to write plainly the name of their post-offices. Every year mistakes occur by subscribers not stating the name of their post-office.

THE MISSOURI FRUIT GROWERS' ASSOCIATION will convene at St. Louis on the 8th day of January. Free Return Tickets on the Railroads will be given to Delegates in attendance. Let there be a large turn out of all interested in Fruit Culture. Packages of fruit may be sent to NORMAN J. COLMAN, President of the Association.

NEW NURSERY FIRM.—We see, by our exchanges, that the well-known Nurseryman and Pomologist, Mr. A. G. Hanford, of Waukesha, Wisconsin, has purchased the interest of Ellwanger & Barry, in the Columbus, Ohio, Nursery, and will, hereafter, with Mr. Batcham, conduct the business at the latter place. They will make a "strong team," and undoubtedly do a large and profitable business.

THE AMERICAN JOURNAL OF SCIENCE AND ARTS.—We have received the last number of this valuable periodical for 1860. Is is one of the oldest publications in the United States, and one of the best in the world of its class, furnishing the most reliable information of the discoveries and progress of science and art throughout the civilized world.

The next number will be issued in January, 1861, Vol. XXXI. new series. It is published every two months, by Professors Silliman & Dana, New Haven, Connecticut.

THE AMERICAN SHORT-HORN HERD BOOK.—Lewis F. Allen, Esq., of Black Rock, New York, has issued the Prospectus of his Fifth Volume of the "American Herd Book," to appear at a period of about two years from the publication of the last volume. Mr. Allen requests all breeders who wish to record pedigrees in the forthcoming volume to forward them immediately, in order to compile them, and to have the work ready for publication by the 1st of May, 1861.

As Kentucky is the great centre for improved Short Horns, her breeders will not delay the matter, and those who have more recently embarked in breeding this stock in the more Northern and Western States, will, of course, see it to their interest to attend to forwarding their pedigrees without delay.

THE SCIENTIFIC AMERICAN.—We need only remind those who are not familiar with the high character of this work, (and who that is engaged in any scientific or mechanical pursuit is not?) that there is no work in the English language, or indeed in any other, superior to it in merit. It occupies the whole field of scientific and mechanical discovery and invention, and is the firm friend of American inventors. The conductors, through their patent agency, do more in securing patents on new inventions both in this country and in Europe, than all others engaged in the business. Published by Munn & Co. New York. Terms, $2 a year.

THE GARDENER'S MONTHLY.—With the present month this excellent periodical commences its third volume. It fills a place not occupied by any other publication devoted to Agriculture and Horticulture in the United States. It is edited by Thomas Meehan, Esq. one of the most intelligent and practical gardeners in the country, and is indispensable to all engaged in the ornamental branches of gardening, to nurserymen, and is useful to all. It is published at 23 North Sixth Street, Philadelphia. Terms, $1.00 a year.

AGRICULTURAL LECTURES AT YALE COLLEGE.—The second course of Agricultural Lectures, under the auspices of Yale College, will be held in New Haven, Connecticut, during the month of February, 1861. The lectures will be delivered in the hall of the new building of the Philosophical Department of the College. The list of lecturers will embrace all those, we believe, who attended last year, together with a considerable number of others, comprising the most distinguished men devoted to the various departments of Agriculture, Horticulture, Stock Raising, &c. in this country. This plan we deem one of the most important that has been undertaken in the United States for the promotion of Agriculture in all its various branches. Full particulars may be obtained by addressing Prof. John A. Porter, New Haven, Connecticut.

WOOL AND SHEEP GROWING IN KANSAS.—Gov. Medary, of Kansas, in a communication to the "Ohio Cultivator," says:

"In my travels through the territory, I have persuaded myself that Kansas is the best wool and sheep growing country in the Union, Texas not excepted, and I am desirous of laying this matter specially before the wool growers of Ohio and the East as worthy of their attention. I have examined the country South and West, and have got myself into quite a fever on the subject, but I cannot go fully into it."

THE ROLANDER GRAPE.—Our friend, D. C. Tuttle, Esq., of St. Genevieve, Mo. an enterprising horticulturist, will accept our thanks for a box of the above grapes. We saw this variety at Hermann, and it is favorably thought of there. It is undoubtedly of foreign origin, and we understand it has proved quite hardy. Bunch medium, compact, somewhat shouldered; berry medium, purple, skin thin, sweet vinous flavor, having but little pulp, and really an excellent grape. It originated at St. Genevieve, Mo. and is supposed to be a seedling from a foreign variety.

VETERINARY SCHOOL IN KENTUCKY.—It is announced in the "American Stock Journal," that Dr. Geo. H. Dadd, Veterinary Surgeon, will, on the first of March next, remove to Louisville, Ky. where he will practice his profession and establish a veterinary school. We are gratified to learn this fact. We know of no location in the United States better suited for a school of this character. Kentucky is a State very largely interested in stock raising, and Louisville is a point where such a school ought to be well sustained. The city now has two regular schools of medicine, and the profession of M.D.'s is already overstocked, while the important branch of veterinary practice is shamefully neglected.

Dr. Dadd is one of the best educated practitioners in the United States, having devoted much time to the study of his profession, both in this country and in Europe, and has, for a number of years, both practiced and conducted a school in Boston.

PREMIUMS for Subscribers to the Valley Farmer, open till April First, 1861.

$150.00.

To the person sending the largest club we will send **ONE OF MANNY'S COMBINED REAPERS AND MOWERS,** worth ONE HUNDRED AND FIFTY DOLLARS. This machine is too well known to need any comment from us. It is manufactured by Messrs. KINGSLANDS & FERGUSON, of St. Louis, of the very strongest and best materials and in the best manner, and is warranted to give satisfaction.

$135.00.

To the person sending the next largest list, we will send **GROVER & BAKER'S SEWING MACHINE,** worth ONE HUNDRED AND THIRTY FIVE DOLLARS. This will be the best and highest priced machine that is manufactured by that enterprising Company. Grover & Baker's machines stand deservedly high, and are admirably adapted to all classes of Family Sewing. Simple in their construction; run quietly and easily; use both upper and lower spools as bought from the store, and therefore do not require the time and trouble of re-winding. These machines are too well known in this region to require any recommendation from us, having taken the First Premium at the last St. Louis Fair, and at several county fairs in various parts of the State. Prices range from $40 to $135.

$100.00.

For the next largest list, we will send **ONE OF SINGER'S SEWING MACHINES,** worth ONE HUNDRED DOLLARS. This machine is everywhere favorably known. The Messrs. Singer have made colossal fortunes by their manufacture. For the last year they have charged only $40 for their excellent Family Machine; but their "Letter A" Machine, which has everywhere given the greatest satisfaction, is sold for only $60, including hemmer, and warranted for three years. Although two sets of hands have worked night and day, yet they have been unable to supply the demand for them. The Singer Machine from the simplicity and power of its construction is able to do all kinds of work, whether heavy or light, and in the most perfect manner. No one who has ever purchased one has regretted it. Edwin Dean, Agent, No. 85 Fourth Street.

$70.00.

For the next largest list, we will send one of **WHEELER & WILSON'S CELEBRATED FAMILY SEWING MACHINES** worth SEVENTY DOLLARS. The number of Wheeler & Wilson's Sewing Machines sold in 1859 was upwards of 21,000. This speaks more loudly in its favor than any praise we could bestow. It has taken some of the most important First Premiums in the United States. It is admirably adapted to all kinds of family sewing. It is very easy to learn how to use it, and will give entire satisfaction to all purchasers. A. Sumner, No. 133 North Fourth Street, St. Louis, is Agent, and is always pleased to exhibit their merits. Prices vary from $50 to $100.

$45.00.

For the next largest list we will send **E. CLARK'S REVOLVING LOOPER DOUBLE THREADED FAMILY SEWING MACHINE,** worth FORTY-FIVE DOLLARS. This Machine is an improvement on the Raymond Machine, and in the hundreds of families where it has been used in Missouri it has pleased all by the ease, beauty and simplicity with which it performs its work. Elias Clark, No. 82 North Fourth Street, St. Louis, is Agent.

$43.00.

For the next largest list we will send one of **Robingson's Water Elevators,** with Chain and Cups, for raising water from a well forty feet deep, worth FORTY-THREE DOLLARS. This is the best pump in use—does not freeze, purifies the well and water, thus preventing sickness—and can be used for raising water from any depth—is especially desirable where cistern water is used, as it keeps always clear and pure. W. I. HENRY, St. Louis, Mo. P. O. Box 783, Proprietor.

$40.00.

For the next largest list we will send **Vandiver's Union Corn Planter,** manufactured by J. W. Vandiver, Shelbina, Mo. worth FORTY DOLLARS. This is one of the best corn planters manufactured. By the use of a team and two men it marks out the ground and drops and covers two rows as fast as the horses walk.

$25.00.

To the person sending the next largest list we will send **Trees and Plants,** to be selected from the ST. LOUIS NURSERY, to the value of TWENTY-FIVE DOLLARS.

$15.00.

To the person sending the next largest list we will send **Easterly's Hay, Straw and Stalk Cutter,** worth FIFTEEN DOLLARS.

$5.00.

To the person sending the next largest list we will send **Agricultural Books,** to be selected from the Catalogue of Saxton, Barker & Co., to the value of FIVE DOLLARS.

Persons in Missouri and contiguous States, will address "Valley Farmer," St. Louis, Mo.

Persons in Kentucky and contiguous States, will address "Valley Farmer," Louisville, Ky.

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DWARF BROOM CORN SEED.

The undersigned offers a very desirable variety of Dwarf Broom Corn Seed for sale, the stalks of which, on an average, are not more than 18 inches to 2 feet high to the brush, and the brush is of about the same length—the whole plant being only 3 to 4 feet high.—The broom is far superior to the old tall variety, being much finer in fibre and much more elastic. It will yield fully twice the amount of brooms from an acre of land than the old tall variety does. On account of its dwarf habit it bears closer planting, and will resist the severest storm, and is never blown down. The brush is wrapped up about half its length in the top leaf, which obviates it from bending down, and consequently keeps the broom straight. This Dwarf variety will prove indispensable to all cultivating this valuable crop. Price 15 cents per ounce package, or $2 per lb. Sent by mail postpaid. Address

ja'61—3t] CHAS. RAYMOND, Shaw's Point, Ill.

CHESTER WHITE PIGS.

The subscriber continues to breed and ship to order, PURE BRED CHESTER WHITE PIGS, of the best quality.

SETH A. BUSHNELL.

HARTFORD, Trumbull County, O. Nov. 28, 1860.

[jan'61—3t*]

IMPORTANT TO STOCK GROWERS.—THE THIRD VOLUME of the AMERICAN STOCK JOURNAL Commences January 1st, 1861. It is devoted exclusively to matters relating to the care and mauagement of our domestic animals, and is by far the largest, cheapest, and most widely circulated paper of the kind in the world. No stock grower can AFFORD to be without it,

☞Thirty-two large octavo pages, Handsomely Illustrated. Published Monthly at No 25 Park Row, New York, at $1 per year in advance. SPECIMEN COPIES GRATIS.

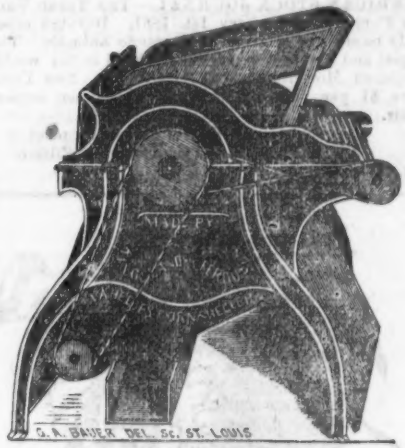
D. C. LINSLEY, Editor and Proprietor.
OTIS F. R. WAITE, Associate Editor.

Jan '61—1t.*

BEE KEEPING EXPLAINED.—The best PRACTICAL work yet published. Sent for One Dollar. Bees for sale by the swarm with Italian Queens. Glass Honey Boxes, &c., &c. Circulars with particulars sent to all applicants. Address M. QUINBY.

ST. JOHNSVILLE, N. Y.

Jan. '61—2t.



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CORN SHELLER.

These Shellers have been more extensively used in the West than any others for shelling corn, and give entire satisfaction. They shell, separate the corn from the cob, and clean the grain.

This sheller received the FIRST PREMIUM at the last Fair (1860) of the St. Louis Agricultural and Mechanical Association.

We also manufacture an excellent HAND CORN SHELLER. KINGSLANDS & FERGUSON,

Dec.'60 Cor. Second and Cherry sts., St. Louis.

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☞ BEST SIX VARIETIES. ☜

WILSON'S ALBANY, JENNY LIND,
LONGWORTH'S PROLIFIC,
HOOKER'S SEEDLING,
WASHINGTON,
LARGE EARLY SCARLET.

For $5, we will carefully pack and deliver, at any Express Office in St. Louis, and mark as directed, FIFTY PLANTS OF EACH OF THE ABOVE CHOICE VARIETIES. For $3, we will send Twenty-five of each of the above kinds. They can be safely sent to any part of the West. Enclose money carefully in a letter and address, CAREW SANDERS & CO.

St. Louis, Mo.

Catalogues of the St. Louis Nurseries.

The Proprietors of these Nurseries have just issued their Retail Catalogue for the ensuing Fall and Spring sales of Trees, Plants, &c. It contains, in addition to the description of a very large number of varieties of Fruits, Flowers, &c. Directions for preparing the soil for planting Orchards and Fruit Gardens; the best method of planting trees; the proper way of pruning trees both before and after planting; hints upon the care of trees, after being received from the Nurseryman; and other information of value to every fruit-grower.

The Proprietors have also issued their WHOLESALE CATALOGUE for Nurserymen, Dealers, &c.

Either of these Catalogues will be sent free of charge to all applicants. Those who think of purchasing will do well to send for a Catalogue or visit our Nurseries. Address,

CAREW SANDERS & CO.
St. Louis, Mo.

AMERICAN STOCK JOURNAL.—THE THIRD VOLUME Commences January 1st, 1861. Devoted especially to matters relating to domestic animals. The largest and cheapest paper of the kind in the world. Published Monthly at No. 25 Park Row, New York. Price $1 per year, in advance. Specimen copies, gratis.

D. C. LINSLEY, Editor and Proprietor.
OTIS F. R. WAITE, Associate Editor.
Jan. '61—1t.*

The Yellow Nansemond,

Is the only variety of Sweet Potatoe that has given entire satisfaction in the North West.

Our stock in store for next Spring is unusually large and of the best quality; and the completion of our R. Road to Rockville, will enable us to fill and forward promptly, all CASH ORDERS with which we may be favored, on the most reasonable terms.

☞ RESPONSIBLE AGENTS WANTED in every county, town, and village, to sprout small lots on halves.—Farmers can club together and buy, or sprout our Sweet Potatoes on shares, and thus secure good plants free of cost.

THE SWEET POTATOE CULTURIST, giving full directions for SPROUTING, PLANTING, CULTIVATING and KEEPING, will be furnished GRATIS to agents and customers; and to others, by mail, POST-PAID, on the receipt of 25 cents in stamps.

Address, J. W. TENBROOK,
Jan.'61—1t Rockville, Ind.

PREMIUM GROVE NURSERY,
PRINCETON, ILLINOIS.

The Proprietors offer for sale a large stock of Apple Trees of the best varieties from 1 to 7 years old. Also, Pear, Plum, Peach and Cherry Trees; Grape Vines; Currants of the best kinds; Gooseberry, Raspberry, Lawton Blackberry, and Strawberry Plants; Pie Plant of choice kinds. Evergreens and other

Ornamental Trees and Shrubs,

In great variety. Roses, Dahlias, Tulips, Hyacinths, and other Bulbous Flowers. Phloxes, Peonies, and other Flowering Plants. Silver Maples 18 inches to 4 feet high, at $10 per 1000.

Catalogues sent on application.

ARTHUR BRYANT & SON.
Nov. '60.

Evergreens, Pear Stocks, Seedlings, &c.

JOHN SAUL,
Washington City, D. C.,

Respectfully calls the attention of the trade to his immense stock of the above, unrivalled alike in quantity, quality and low price, which his many years of experience in this branch of business has enabled him to accomplish. He would enumerate among others the following, viz:

Norway Spruce, 2 year Seedlings, 3 to 5 inches, $4 per 1,000; $35 per 10,000.
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Norway Spruce, 6 to 9 inches, transplanted, very fine, $12 per 1,000; $100 per 10,000.
Norway Spruce, 8 to 10 inches, transplanted, $15 per 1,000.
Norway Spruce, 1 foot, beautiful, $5 per $100; $40 per 1,000.
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Austrian Pine, 5 to 8 inches, transplanted, fine, $15 per 1,000.
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Beech, European, one year Seedlings, $10 per 1,000.
Maple, Norway, 1 year Seedlings, $12 per 1,000.
Maple, English, Sycamore, do. $10 per 1,000.
Maple, Silver, 1 year Seedlings, $5 per 1,000.
Pear Stocks, 1 year, selected, fine, $8 per 1,000.
Mahaleb, do. $10 per 1,000.
Gooseberries, large English, $8 per 100.
Lawton Blackberries, $5 per 100; $40 per 1,000.
Currants; Red Dutch; Red Grape; Victoria; White Dutch; White Grape, &c., &c. $6 to $10 per 100.
Grapes; Delaware, Diana, Concord, Rebecca, To Kalon, Hartford Prolific, &c. at the lowest prices.
Strawberries; every native and European variety of value.
Rhubarb, Grey Eagle, Prince Albert, Randell's Eng. Prolific, Linnæus, with every variety of merit.
Roses, all the fine, new, ever-blooming sorts.
Dahlias, Phloxes, Herbaceous Plants, Bulbous Roots, &c. cheap.

☞ Catalogues mailed on application.

JOHN SAUL.
Washington City, D. C.
Jan. '61—3t.

WESTERN STONE PIPE COMPANY,

MANUFACTURE
Water, Sewer, and House Drain Pipes,
CHIMNEY FLUES.
DRAIN TILE AT 40c, 60c, 80c & $1 per ROD.

All kinds constantly on hand. Piping Drain Tile laid if desired. H. M. THOMPSON & Co.
174 North Main Street.
or WESTERN STONE PIPE COMPANY,
May,'60, Upper Alton, Ill.

Great Work on the Horse.

THE HORSE AND HIS DISEASES:

BY ROBERT JENNINGS, V. S.,

PROFESSOR OF PATHOLOGY AND OPERATIVE SURGERY IN THE VETERINARY COLLEGE OF PHILADELPHIA, ETC., ETC.

WILL TELL YOU Of the Origin, History and distinctive traits of the various breeds of European, Asiatic, African and American Horses, with the physical formation and peculiarities of the animal, and how to ascertain his age by the number and condition of his teeth; illustrated with numerous explanatory engravings.

THE HORSE AND HIS DISEASES

WILL TELL YOU Of Breeding, Breaking, Stabling, Feeding, Grooming, Shoeing, and the general management of the horse, with the best modes of administering medicine, also, how to treat Biting, Kicking, Rearing, Shying, Stumbling, Crib Biting, Restlessness, and other vices to which he is subject; with numerous explanatory engravings.

THE HORSE AND HIS DISEASES

WILL TELL YOU Of the Causes, Symptoms, and Treatment of Strangles, Sore Throat, Distemper, Catarrh, Influenza, Bronchitis, Pneumonia, Pleurisy, Broken Wind, Chronic Cough, Roaring and Whistling, Lampas, Sore Mouth and Ulcers, and Decayed Teeth, with other diseases of the Mouth and Respiratory Organs.

THE HORSE AND HIS DISEASES

WILL TELL YOU Of the causes, symptoms, and Treatment of Worms, Bots, Colic, Strangulation, Stony Concretions, Ruptures, Palsy, Diarrhœa, Jaundice, Hepatirrhœa, Bloody Urine, Stones in the Kidneys and Bladder, Inflammation and other diseases of the Stomach, Bowels, Liver and Urinary Organs.

THE HORSE AND HIS DISEASES

WILL TELL YOU Of the causes, Symptoms, and Treatment of Bone, Blood, and Bog Spavin, Ring-Bone, Sweeney, Strains, Broken Knees, Wind Galls, Founder, Sole Bruise and Gravel, Cracked Hoofs, Scratches, Canker, Thrush, and Corns; also, of Megrims, Vertigo, Epilepsy, Staggers, and other diseases of the Feet, Legs, and Head.

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WILL TELL YOU Of the Causes, Symptoms and Treatment of Fistula, Poll Evil, Glanders, Farcy, Scarlet Fever, Mange, Surfeit, Locked Jaw, Rheumatism, Cramp, Galls, Diseases of the Eye and Heart, &c., &c., and how to manage Castration, Bleeding, Trephining, Roweling, Firing, Hernia, Amputation, Tapping, and other surgical operations.

THE HORSE AND HIS DISEASES

WILL TELL YOU Of Rarey's Method of Taming Horses; how to Approach, Halter, or Stable a Colt; how to accustom a horse to strange sounds and sights, and how to Bit, Saddle, Ride, and Break him to Harness; also, the form and law of WARRANTY. The whole being the result of more than fifteen years' careful study of the habits, peculiarities, wants and weaknesses of this noble and useful animal.

The book contains 384 pages, appropriately illustrated by nearly One Hundred Engravings. It is printed in a clear and open type, and will be forwarded to any address, postage paid, on receipt of price; half bound, $1.00, or, in cloth extra, $1.25.

$1000 A YEAR!

Can be made by enterprising men everywhere, in selling the above, and other popular works of ours. Our inducements to all such are exceedingly liberal.

For single copies of the Book, or for terms to agents, with other information, apply to or address,

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No. 617 Sansom Street Philadelphia, Pa.
jan.'61—6t.ic.

PAUL BOSSANGE,

49 Walker Street, New York.

IMPORTER OF

Trees, Shrubs and Seeds,

Offers for sale to NURSERYMEN and FLORISTS, from the Nursery of LOUIS LEROY, Angers, France, viz:

	per 1,000.
Pear Seedlings, Extra, - -	$10 00
Do. First Choice, one year old,	8 00
Do. Second " " -	4 00
Quince Stock, First Choice, " -	6 00
Do. Second " " -	4 00
Mahaleb Stock, First Choice " -	4 00
Do. Second " " -	3 00
Apple Stock, Doucin, First Choice, do.	10 00
Do. do. do. -	10 00

Also from A. CHATENAY & BROS. Nurseries, at Vitry, on the Seine, near Paris, viz:

	per 1,000.
Pear Stock, First Choice, one year old	$6 00
Do. Second " " -	4 00
Quince Stock, 1st do. (Fontenay) " -	3 50
Apple Stock (Paradise) " -	6 00
Do. (Doucin) " -	6 00
Cherry Stock, First Choice, " -	6 00

Also from PORTEMER & SON, Gentilly, France, viz:

	per 1,000
Apple Seedlings, First Choice, one year old	$6 00
Do. Doucin do. " -	10 00
Do. Paradise do. " -	12 00
Cherry Mahaleb do. " -	4 00
Pear Seedling do. " -	8 00
Do. Second do. " -	6 00
Do. First do. 2 years old -	9 00
Do. Second do. " -	7 00
Quince Stock, First, do. one year old -	7 00
Do. Second do. " -	5 00

EVERGREENS of all the approved hardy varieties.

In order to insure a GOOD SELECTION, parties must order EARLY. Catalogues will be mailed gratis, on application to the agent.

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jan.'61 49 Walker, St. N. Y.

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25,000 APPLE TREES, Grafts, 4 years old.
56,000 Apple Trees, Grafts, 2 years old.
50,000 Apple Trees, Grafts, 1 year old.
100,000 Apple Stocks, 2 years old.
500,000 Apple Stocks, 1 year old.
5,000 Currants, Red and White, 1 year old.
Also, Peach, Pear, Grape, Rhubarb, Blackberries, Strawberries, Gooseberries, &c. by

COLMAN & DRAKE,
McLean County Nursery, Bloomington, Ills.
[Oct '60—4t]

CONCORD GRAPE VINES.

CAREW SANDERS & CO.

OF THE

St. Louis Nursery, St. Louis, Mo.

Having a large stock of this new and valuable Grape on hand, consisting of strong, well-rooted layers, offer them for sale at the following reduced rates:—

Per Plant, - - -	Fifty Cents.
Per Dozen Plants, - -	$5.00.
Per Fifty Plants, - -	$18.00.
Per Hundred Plants, -	$30.00.

The Concord Grape is rapidly growing in favor, and is now generally admitted to be the best for general cultivation of all known kinds. The *Southern Country Gentleman* says of this Grape:—

"For market purposes and for wine, we think that the Concord Grape stands unrivalled among American seedlings. And for these reasons—The habit of the vine is remarkably healthy and vigorous, and for the early bearing of full and abundant crops we have never seen its equal. When we add to these, its exemption from all disease—its early and uniform ripening—its magnificent appearance, both of bunch and berry, and its very good quality, we think we have not gone too far in assigning it the above position. DESCRIPTION—Bunches large, round and black, and covered with a thick bloom. Flesh moderately juicy, buttery and sweet, with considerable toughness and acidity in its pulp. Ripens from ten days to two weeks earlier than the Isabella."

The Editor of the *Germantown Telegraph*—good authority—thus speaks of it—

Several gentlemen, within the last two weeks, have called upon us to test the Concord grape, and they, one and all, concurred in our estimate of it—said they wanted no better grape, and would at once cultivate it as the best out-door variety they knew. We repeat our experience of it; 1. It is perfectly hardy, ripening its wood to the very tip. 2. It is a rapid grower. 3. It is easy propagating from cuttings. 4. It is an early bearer. 5. It is a regular and productive bearer. 6. The fruit will remain on the vines, without injury, except from bees, to the first of November. 7. Neither bunches nor berries drop off. 8. The berries are of large size, and the bunches compact and shouldered, some weighing a pound and a half. 9. The quality is preferred by many even to the Delaware, and will grow upon your good opinion as you become accustomed to it. We believe most of our nurserymen have it for sale.

Hear what is said of the Concord in the South-West. Mr. George Husmann, of Hermann, Mo. an experienced and successful grape grower, and a person well acquainted with the qualities of our grapes, describes it as follows:

"Bunch, large and heavy, compact, shouldered; berry larger by one-third than Catawba, round, black, with a slight bloom; skin somewhat thick; flesh juicy, pulpy, buttery, sweet and lucious, with an agreeable flavor. Not affected in the least by mildew and rot; very productive. Ripens two weeks before Catawba. Not tried here for wine, but said to make a good red wine.

"Vine a strong and robust grower, very hardy, and will keep its leaves fresh and green till frost, ripening its shoots well to the remotest points, yet not so rampant but it can be well kept in order in the vineyard. It is a fine vine to cover arbors, as it has a very large, healthy leaf, and will never suffer from frost in winter.

"The real value of the Concord can only be appreciated, when we compare its healthy appearance, and its beautiful, perfect bunches of fruit, with the sickly foliage and imperfect bunches of the Catawba. While we have lost full one-half of our Catawba crop this season, by rot and mildew, the Concord lost not a berry, and it is truly a glorious sight. Take all its qualities—its splendid large bunch and berry, its good quality, and its early ripening—and we have a market grape which is truly hard to beat."

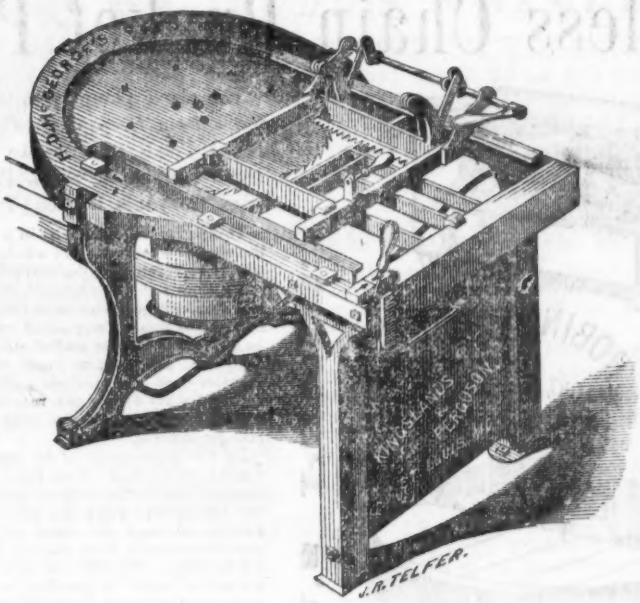
Mr. Samuel Miller, of Calmdale Nurseries, Lebanon county, Penn. excellent authority, thus speaks of it:

"At the East and North they really do not know what a good Concord is, and the farther it is removed South the better it becomes in quality. Such is the Concord, as I have found it, the last two unfavorable seasons, and my firm belief is, that it will never fail to bring a good crop here. I hope that all your readers who have a few feet of ground to spare for a grape vine will try it."

H. D. McGEORGE'S
EXCELSIOR SHINGLE MACHINE.

Patented March 3, 1857.

Will make from 10,000 to 25,000 Shingles in Ten hours.



Received the First Premiums at the Fairs of 1858 and 1860, of the St. Louis Agricultural and Mechanical Association.

The above cut represents the St. Louis Improved Style or Pattern of this famous mill.

Manufactured and Sold by Kingslands & Ferguson.

The following are some of the advantages which we claim for the Excelsior Shingle Mill—

1. This machine is the most simple, complete, comprehensive and durable machine for making shingles, barrel heading, and all kinds of short lumber, that is now in use or known to exist.

This machine is composed of iron and steel, and is made in the most permanent manner, embodying simplicity, strength and durability—is light, easily worked, and requires but a limited space for action. It will never be, like other mills, constantly out of repair, for its construction is such as to forbid such a conjecture; all the parts exposed to wear or friction are made of the best steel.

2. This mill can be operated with less power, and do more than double the work and do it better than any machine now in use, requiring one-half less number of hands to attend it.

3. This mill will make one-fourth to a third more shingles from a given amount of timber, than can be made with any other machine.

4. This mill will make a more perfect, uniform shingle, smoother and better than can be made by hand or by any other machine extant.

5. This mill will work in seasoned or green, hard or soft timber, and do its work equally as well in one as the other.

This mill occupies less space, is less cumbersome, and in every way more convenient, than any mill to be found; can be put up for work in one hour, and not cost one dollar in setting up.

7. The saw in this mill runs with perfect exactness, without the slightest vacillation or tremble to the motion of the saw.

8. This mill will make from 10,000 to 25,000 shingles in ten hours, if the saw is kept in order, and the mill properly attended to as it should be.

9. This mill takes in a bolt 23 inches long; will take in a 42 inch saw. One or two saws are fitted to the same arbor, and is changed at will in a minute. The shingles are cut butt and point alternately from the bolt and with the grain of the wood.

10. No other mill can make liners, barrel-heading, boxing and short lumber, which this mill makes with as much ease as it makes shingles.

11. We claim to be the owners of the right in the territory as hereinafter named, and shall most positively prevent any infringement upon our right.

12. We claim to be reasonable in our terms, and will dispose of rights and mills upon application.

13. We claim the ability to demonstrate the facts as above stated to the satisfaction of all parties.

This machine requires from three to six-horse power only. Any kind of power which is sufficient to drive the machine can be used. The log is usually cross cut with a saw arranged for that object, and is driven by power. One man will saw and bolt up the timber for a machine; one man can feed the machine and boys do the rest. Two men and three boys can make and bunch up 20,000 shingles in ten hours. Ten cubic feet of timber will make 1000 shingles.

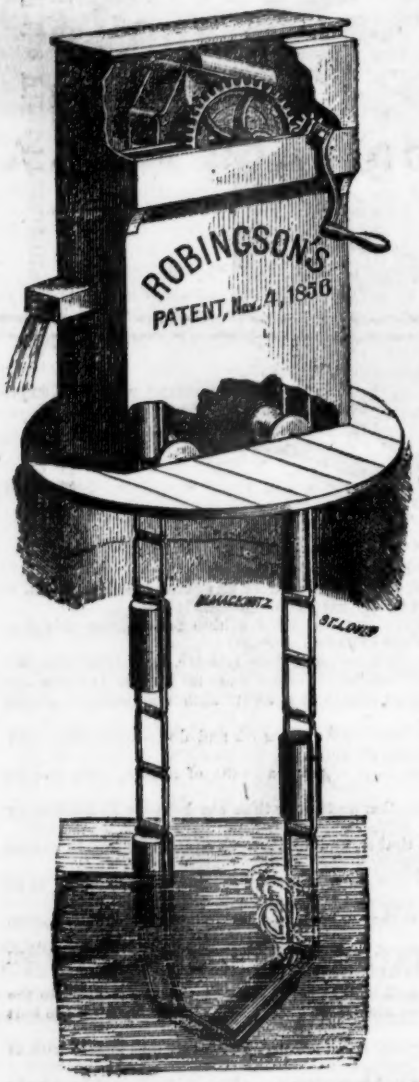
For any further information please address the subscriber and proprietor, at ST. LOUIS, Box 783 or the manufacturer.

ja'61) **W. I. HENRY, Proprietor of the Right for Missouri, Illinois, and Wisconsin.**

THE FIRST PREMIUMS AT THE GREAT ST. LOUIS FAIRS,

Held in 1859 and 1860, for the Best Apparatus for Raising Water, were awarded to the

Endless Chain Bucket Pump.



Robingson's Patent.

The above pump is suitable for raising water from Deep Wells, Cisterns, Cellars, Mines, Ponds, Quarries, &c. for the use of Dwellings, Stores, Mills, Factories, Breweries, Tan-yards, Railroad Tanks, &c.

This pump will not freeze in a well or cistern in the coldest weather. The whole pump can be removed to another well, if desired, in half an hour.

By means of this Elevator, water can be raised to a greater hight, with more facility and ease, and at less cost than by any other process now in use. So great is the power and so simple the construction, that a child ten years old can, with the greatest ease and perfect safety, raise from a depth of sixty feet at the rate of six gallons per minute. A man can raise from eight to ten gallons per minute.

By the philosophy of its construction it will convey the fresh air from the top of the well or cistern down to the bottom, and discharge it under the water. Thus the pure air is constantly rushing through the water, whilst at the same time the water is kept running by the passage of the buckets. The effect of this is, that the foulest well of water is purified in a few days, and kept sweet as long as this pump is used, thus preventing sickness.

All the machinery is made of the most durable material. The whole pump is of iron except the box. The chain is of wrought iron, the buckets of galvanized iron, which is not subject to corrode or rust.

We refer to a few prominent persons using the Elevator—

F. J. Thompson, Esq. Rock Road, 10 miles out;

A. J. L. Stephens, Bonhomme Bottom;

T. L. Salisbury, Sec. of Home Mutual Ins. Co.

W. H. Jennings, St. Louis;

T. J. Albright and others, Kirkwood;

I. Hunt, De Soto, 2 power pumps;

J. Ierland, St. Joseph, Mo.;

J. Grigsby, Upper Alton, Ill.;

The St. Louis Editor of this Journal has one of these pumps, and is highly pleased with it.

Col. C. M'Laran, St. Louis.

We have greatly improved on the Box, &c. represented in the cut—it is now perfect.

☞ This Pump is WARRANTED to give satisfaction on trial.

Manufacturers, NIXON & ELLISON, Millwrights and Machinists, S. E. corner of Broadway and O'Fallon Streets.

T. J. ALBRIGHT & SON, No. 50 North Fourth Street, between Pine and Olive, west side, Agents for the sale of Pumps.

W. I. HENRY, Proprietor,

And General Agent for sale of Territory and Pumps, can be consulted by letter, P.O. box 783, St. Louis, or at the Manufactory.

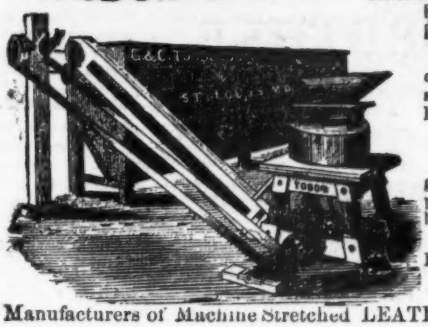
[Ja'61]

Mill Furnishings.

Established 1835.

TODD'S CHALLENGE.

As the under stone revolves, they may be run to a high speed without choking, and having RUBBER SPRINGS, patented by us, they **WILL NOT BURST WHILE RUNNING**, when pieces of iron get between them, as many mills have done on the stiff principle. Our spindles have steel toes and inces, with set screws at both ends, so that the faces of the stones can be kept parallel with each other, and the meal be ground even enough for Flour, which are important improvements, insuring SAFETY TO THE MILL TENDER, and good work, and ought to be put in all lower stone mills.



IRON BACK MILLS.

The top Stone is the runner and operated the same as the ordinary flouring mills; their construction is simple and substantial and of the best material. Any good careful hand can run them.

Todd's Portable Flouring Mill.

This mill is simple, compact and complete, calculated to grind and bolt for the best custom or grist work—can be packed so as to ship to any place, and can be put together by any good mechanic.

Various sizes and prices.

Importers of DUTCH BOLTING CLOTHS, FRENCH BURR MILL STONES. Dealers in RUBBER BELTING, STEAM PACKING, HOSE, &c.

Manufacturers of Machine Stretched LEATHER BELTING, Cemented and Riveted.

Address, G. & C. TODD & Co.
No. 212 North Main Street, St. Louis, Mo.

May'60,1y.

JNO. GARNETT. WM. KOENIG.
JAS. P. BLUNDEN.

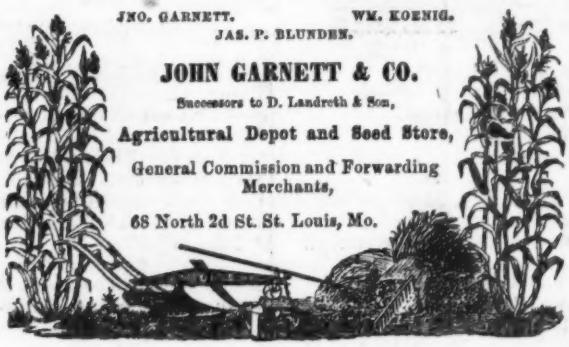
JOHN GARNETT & CO.

Successors to D. Landreth & Son,

Agricultural Depot and Seed Store,

General Commission and Forwarding Merchants,

68 North 2d St. St. Louis, Mo.



FARM SEEDS:

We keep constantly on hand a large stock of Choice and Fresh, **CLOVER, TIMOTHY, BLUE GRASS, HERDS GRASS, ORCHARD GRASS, and LUCERNE SEEDS**—and buy on order, **SEED WHEAT, OATS BARLEY AND RYE.** We buy always the best in the market, and supply our customers with none but pure and fresh seed. We invite attention to our stock with confidence that we will meet all the wants of those who call upon us. Of

GARDEN SEEDS,

We have the best stock in the market, and warrant every package to be fresh, genuine, and certain to germinate.

Send for our Illustrated Catalogue and Almanac for 1861, with prices of all Implements attached. **John Garnett & Co.**

ja'61] 68 North Second Street, St. Louis, Mo.

ST. LOUIS AGRICULTURAL WAREHOUSE, And Seed Store,

ESTABLISHED 1845, BY WM. M. PLANT,

☞ *SIGN OF THE GILT PLOW.* ☜

No. 14 North Main Street, between Market and Chesnut Streets,

Also No. 203 NORTH FOURTH STREET (Fronting on two streets), and 218 BROADWAY,

ST. LOUIS, MO.

PLANT & BROTHER,

WM. M. PLANT.] WHOLESALE AND RETAIL DEALERS IN [ALFRED PLANT.

AND MANUFACTURERS' AGENTS FOR THE SALE OF

Agricultural Implements and Machines,

MACHINE BELTING, STEAM PACKING, HOSE, FENCE WIRE; MANCHESTER COMPANY'S RAILROAD, HAY, COAL, WAREHOUSE, PLATFORM, COUNTER, GROCER AND DRUGGISTS' SCALES, AT FACTORY PRICES.

—ALSO—

Garden, Grass and other Seeds.

SEEDS.

Timothy, Clover, Red Top,
Kentucky Blue Grass, Hungarian,
Orchard Grass, Hemp, Millet,
Osage Orange, Top Onions,
Bird Seeds,
200 bushels 1860 Peach Pits, $1 00 per bushel, $2 50 per barrel.
Garden and Flower Seeds, a large assortment.
☞ *Send for Catalogues.*
Bird Cages, Bird Founts, Bird Baths,
Bulbs, Bulb Glasses, Flower Pots,
Agricultural Books.

IMPLEMENTS AND MACHINES.

Plows, Harrows, Cultivators,
Seed Drills and Sowers,
Iron Garden and Field Rollers,
Ox Yokes and Bows, Iron Road Scrapers,
Hay, Straw, and Corn Stalk Cutters,
Corn Shellers, Corn and Cob Mills,
Portable French Burr Stone and Iron Corn Meal and Flour Mills—several patterns.
☞ *Send for Circulars.*
Horse Powers, Threshers, Fan Mills,
Krauser's Cider and Wine Mills,
Sugar Cane Machinery.

We are also Manufacturers' Agents for the Sale of

Wood and Iron Working Machinery.

☞ *PORTABLE STEAM ENGINES, CALORIC ENGINES,* ☜

WOOL CARDING MACHINES, COACH SCREWS, STORE TRUCKS, CISTERN, DEEP WELL, ENGINE AND CHAIN PUMPS, HYDRAULIC RAMS,

Kirby's Combined American Iron Harvester.

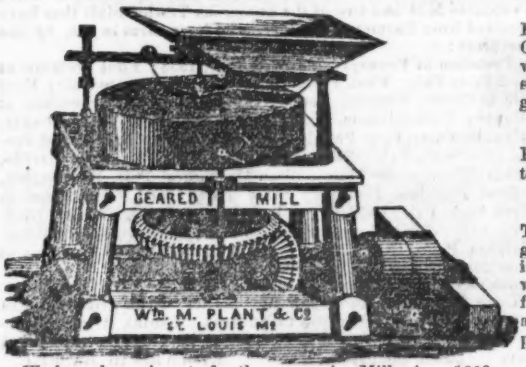
All of which we offer at the lowest possible CASH PRICES. Call and See.

PLANT & BRO.

BURROWS' PORTABLE GRIST MILL.

These Mills took the First Premium at the

ST. LOUIS AGRICULTURAL AND MECHANICAL ASSOCIATION, IN THE FALL OF 1856.



They are composed of the best quality of French Burr Stones, inclosed in a Cast Iron Case to give strength and weight to the Stone which is indispensable in small mills, where the stone is run with great speed, and becomes dangerous if not strongly made.

They can be run with Steam, Horse, or Water Power, and do not require a millwright to set them up, as they are already trammed to run.

They will grind Wheat as well as Corn. The 30 inch Mill, if put to its highest speed, will grind from 12 to 20 bushels per hour, and the 30 inch geared mill is admirably adapted to use with saw mills. We have sold a large number for this purpose, and with uniform success—also for making flour, and they are highly approved of by all who have tried them.

We have been Agents for these superior Mills since 1852, and all have been sold on a warrant to perform as above; and so far as heard from, not one has failed to give the very best of satisfaction.

WEIGHTS, CAPACITY BY STEAM POWER, AND PRICES:

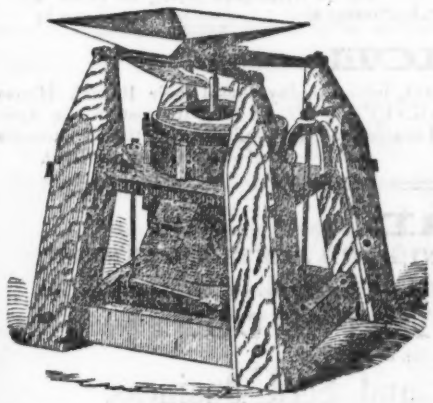
20	inch Stone with Pulley,			950	$115,	with Gear,	1200,	$125,	6 to 10	bushels	per	hour.
24	"	"	"	1300	135,	"	"	1600,	160,	10 to 15	"	"	"
30	"	"	"	2000	175,	"	"	2500,	200,	12 to 20	"	"	"
36	"	"	"	2800	225,	"	"	3500,	265,	20 to 30	"	"	"

We keep a large supply of, and will furnish with Mills when desired at lowest market rates.

BELTING, STEAM PACKING, BOLTING CLOTHS, PICKS AND HOISTING SCREWS.

☞ *CALL AND SEE.* *PLANT & BROTHER.*

No. 14 NORTH MAIN STREET, ST. LOUIS, MO.



SINGLE GEARED.

Straub's Portable

GRIST MILL.

Of these Mills we have five sizes for Corn, and three expressly for Wheat.

Keeping a full supply in Store, we can fill orders at the shortest notice.

Below, we give table of Speed, Capacity and Prices.

For sale by

PLANT & BROTHER,

14 North Main Street, St. Louis

MILL.	Width of the Band in Inches.	Revolutions of Pulley per minute	Diameter of Pulley in Inches.	Revolutions of Millstone per Minute.	Table of Capacity by Steam Power.	Table of Prices for Corn Mills.
30 inch Mill, Single,	9 or 10	390	18 or 20	390	20 to 25 bushels per hour,	Single Geared, $175.
30 inch Mill, Double,	9 or 10	195	20 or 24	390		Double " 200.
26 inch Mill, Single,	8	400	18	400	15 to 20 " "	Single " 140.
26 inch Mill, Double,	8	200	20	400		Double " 165.
22 inch Mill, Single,	8	400	12	400	12 to 15 " "	Single " 125.
22 inch Mill, Double,	8	200	16	400		Double " 150.
18 inch Mill, Single,	8	420	12	420	10 to 12 " "	Single " 100.
18 inch Mill, Double,	8	210	15	420		Double " 125.

FLOUR, FEED, AND HAND MILLS.

EVERY FARMER AND PLANTER HIS OWN MILLER. GREAT SAVING OF TIME AND EXPENSE

Coleman's Patent Plantation and Farm Mills.

We hereby subjoin some of the Premiums that have been awarded to this valuable Mill and two of the numerous Testimonials that have been received from Farmers and others who have them in use, by the manufacturers:

First Premium at Pennsylvania State Fair, 1858; First Premium at Maryland State Fair; First Premium at Delaware State Fair; First Premium at Chester County, Pennsylvania, Fair; First Premium at Berks County, Pennsylvania, Fair; First Premium at York County, Pennsylvania, Fair; First Premium at Salem County Fair; First Premium at Ohio State Fair; First Premium at U. S. Fair, at Louisville, Ky.; Silver Medal at the Metropolitan Mechanics' Fair, Washington, D. C.; First Premium Kentucky State Fair, 1858; First Premium New York State Fair, 1858; First Premium at U. S. Fair, at Richmond, Va. 1858; First Premium at the Fair of the Franklin Institute, Phil adelphia, Penn. 1858; First Premium at the Agricultural Fair of the American Institute, N. Y. 1859.

GENTLEMEN: Having used one of your Farm Mills with my sweep power, I can fully testify to its superior merits. I can grind from 10 to 12 bushels per hour, according to fineness. I think it superior to any that has come under my notice, and think every farmer should have one. Salem County, N. J. EDWARD H. BASSET.

WASHINGTON, Will Co. Ill.

THE COLEMAN FARM MILL COMPANY.—One of your Mills was put up in Elkhart County, Ind. in a steam saw-mill, and there was a large collection of farmers to see the trial. Wheat that weighed 59 lbs. we ground in ten minutes to the bushel, and got 39 lbs. of first rate flour, which was better than they could do at their custom mills. We also ground 12 bushels of corn per hour, and all highly applauded the mill.

WM. A. BLISS, West Creek, Lake Co. Ind.

This Mill is so arranged that it not only cuts but crushes the grain, thereby insuring its durability. It will grind corn in the ear, shelled corn, wheat, buckwheat, rye, oats, all kinds of dry drugs, spices, bones, &c. It occupies a space less than three feet square, weighs about 250 lbs. and can be run either by horse, wind, water or steam power.

Price Hand Mill for grinding Corn, Coffee, &c. - - - - - $12 00
" Feed " with seive attached for making family meal, - - - - 55 00
" Flour " " bolt " " flour, - - - - 80 00

All information given, and for sale by **PLANT & BROTHER,**
No. 14 North Main Street, St. Louis. Mo.

And **HOWARD & MIDDLETON,** 371 Main Street, Louisville, Ky. mar,1y

NOTICE.

DAVID LANDRETH & SON, OF PHILADELPHIA, have this day closed their Branch House in St. Louis, and transferred to Messrs. JOHN GARNETT & CO. all their interest in the *Agricultural Implement and Seed Trade* in said city, and desire that the confidence of their customers may be extended to their successors. Oct. 15th, 1860.

CARD.

JOHN GARNETT, WILLIAM KOENIG AND JAMES P. BLUNDEN,

(The latter, long a seedsman in the employ of Messrs. D. Landreth & Son,) have united under the firm of

JOHN GARNETT & CO.

For the prosecution of the

Agricultural Implement and Seed Business.

They will constantly keep on hand a full supply of **LANDRETH'S WARRANTED GARDEN SEEDS,** all fresh and of the growth of 1860, to be obtained at the old house, at Philadelphia, and will confine their sales of Garden Seeds exclusively to those. They will keep a very large stock of **ALL IMPLEMENTS AND MACHINERY IN USE,** embracing all the leading articles in the trade, of the best manufacture.

They solicit the continued custom of their friends, and of all those who have dealt at the Branch House of D. Landreth & Son, at St. Louis. Our prices shall be very low in accordance with the times, and we hope to satisfy all who call on us, as to the superior quality of our stock, and the prices.

Our business after the 1st of January, will all be done at

Our Old Stand, No. 68 Second St. Saint Louis, Mo.

OUR TERMS ARE CASH, AND THE PRICES TO CORRESPOND.

Send for Illustrated Catalogue, and Gardener's Almanac for 1861.

JOHN GARNETT,
WILLIAM KOENIG,
JAMES P. BLUNDEN.

ja'61] 68 North Second St. Saint Louis, Mo.

FARMERS

Who have large families, and want an ECONOMICAL, CONVENIENT, AND COMPLETE

COOKING STOVE!!

Are invited to examine GILES F. FILLEY'S

IMPROVED CHARTER OAK!

(Patent re-issued 27th December, 1859,)

Which is now made with an

Extended Top Plate,

Adding 2 holes and 50 per cent. to the boiling capacity.

A Hot Water Reservoir,

Wherein twenty gallons of water are kept BOILING HOT, by the SURPLUS HEAT which has PASSED OUT OF THE STOVE.

A TIN CLOSET,

For Warming Plates, Keeping Meats and other Dishes Hot, and facilitating the Raising of Bread in Cold Weather:

IMPROVEMENTS AND CONVENIENCES,

Which will be appreciated by every good housekeeper.

SOLD BY ALL THE STOVE DEALERS, AND AT WHOLESALE AND RETAIL BY THE PATENTEE

GILES F. FILLEY,

155 & 157 MAIN STREET, ST. LOUIS, MO.

In addition to the above, I have over 150 varieties of

Parlor, Box and Cook Stoves!

July, 1860. ☞ PRICE LISTS AND CATALOGUES FURNISHED ON APPLICATION.

ONE WORD TO THE LADIES

Upon the Subject of Sewing Machines.

You have all heard of the World Renowned

WHEELER & WILSON SEWING MACHINE!!

What a splendid

HOLIDAY

Present!

Highly Useful,

SUBSTANTIAL,

And Ornamental.

The most profitable and agreeable domestic servant, you can have in your family. Always in good humor, seldom or never out of order, of GREAT EXPERIENCE, ready to do your bidding, and a perfect storm to turn off work, the more the better. Never weary, always ready.

We now offer these incomparable Sewing Machines, with important improvements, at

GREATLY REDUCED PRICES.

This Machine has won for itself a name over all other machines, having always taken the lead in the number of sales; has taken the

First Premiums in Every State in the Union!

In short, it is too well known to the public to need further comment. What more appropriate

HOLIDAY PRESENT,

For the wives and daughters of our farmers; unlike most presents, this will PAY its way, and yield a four-fold dividend at the end of the year.

All orders promptly answered, and Machines delivered to any part of the country on short notice.

PRINCIPAL OFFICE—

No. 133 North Fourth Street, St. Louis.

Justly styled the PREMIUM MACHINE, as it has taken more FIRST PREMIUMS than all of its competitors combined.

The elegance, speed, noiselessness and simplicity of the machine, the beauty and strength of the stitch, being ALIKE ON BOTH SIDES, impossible to ravel, and leaving no chain or ridge on the under side, the economy of thread and adaptability to the thickest or thinnest fabrics, have rendered this the most successful and popular Family Sewing Machine now made.

At my office I sell at New York Prices, and give instructions free of charge to enable purchasers to sew ordinary seams, hem, fell, quilt, gather, bind and tuck, all on the same machine, and warrant it for three years.

☞ Send or call for a Circular containing full particulars, prices, testimonials, &c.

A great variety of SILK, TWIST, COTTON, &c. constantly on hand.

jan.'61. **A. SUMNER.**

E. CLARK'S

Revolving Looper,

Double Threaded,

FAMILY SEWING MACHINE.

Improved upon the Raymond.

The Raymond Double-Threaded Family Sewing Machine, during the short time it has been before the public, has met with a success almost unparalleled in the history of Sewing Machines, OVER ONE THOUSAND HAVING BEEN SOLD AT OUR ROOMS IN ST. LOUIS DURING THE PAST YEAR.

This success is only to be attributed to its REMARKABLE SIMPLICITY and ease of management, taken in connection with the very low price at which it has been offered.

The Machine is now still further improved and simplified by a ROTATING LOOPER, in place of the Re-acting Looper in the former Machine; and is now presented under a new name as given above.

They will Stitch and Hem, Tuck and Fell, Gather and Embroider, with perfection, and are especially adapted to Family Use.

All our Machines are warranted, and may be returned after one month's trial if they do not prove satisfactory.

They will Sew all kinds of Goods, from the finest to the coarsest, and may be used with excellent success in all kinds of light leather work. Any person of ordinary intelligence can, in one hour, learn to use them successfully.

The following are among the advantages they possess over all other Machines:

1st. They are simple, strong and durable, easily understood and managed, and not liable to get out of order.

2d. They will Sew all kinds of Goods from the finest to the coarsest with equal success.

3d. They use cotton from the ordinary spool without re-winding, saving time, trouble and waste.

4th. The Stitch is stronger and more difficult to rip than any other made by machinery, and is superior to the best hand Sewing. The two threads are double looped into each and firmly tied and knotted at every stitch. They take the same stitch as the celebrated Grover & Baker Machine, which is the best and most elastic stitch ever made.

5th. They sew with Cotton, Linen and Silk Thread equally well.

6th. They FINISH their work. There is no occasion to fasten the threads at either end of the seam as is required by all shuttle machines.

7th. Every machine is made to run by hand or foot power, thus combining the advantages of both methods

We have a large list of references, but will give the names of a few only, who are residents of St. Louis:

ST. LOUIS, December 1859.

We the undersigned, citizens of St. Louis, Mo. having used successfully Raymond's Latest Improved Patent Family Sewing Machine, FOR THE PAST YEAR, in our families' service, do cheerfully recommend it to all persons wishing to purchase for family use:

Mrs. D. B. Gale,	Mrs. T. Hequembourg,	Mrs. Wm. Moffet,	Mrs. H. M. Blossom,
Mrs. L. A. Wilkinson,	Mrs. D. R. Arbuckle,	Mrs. L. M. F. Livermore,	Dr. John R. Atkinson,
Mrs. G. W. Phillips,	Mrs. C. F. Whorf,	Mrs. Carew Sanders,	Mr. George Gay,
Mrs. Jas. A. H. Lampton,	Mrs. R. Stevens,	Mrs. Jane Clemens,	Mr. Geo. W. Fishback,
Mrs. A. W. Tillman,	Mrs. J. J. Holliday,	Mrs. D. B. Prescott,	Mr. C. Davisson,
Mrs. J. A. Hale,	Mrs. J. J. Wilcox,	Mrs. N. Ford,	Mr. Edward Berry.
Mrs. F. Meister,	Mrs. John A. Tennison,		

These names are quite sufficient to insure an examination of our Machine by all persons desirous of purchasing, and we invite them to call at our rooms, and examine for themselves. They will find a lady in attendance, who will receive our customers and operate the Machine.

ELIAS CLARK, No. 82 North Fourth Street, St. Louis.

P. AMICK, Traveling Agent.

N.B.—Agents wanted in all the cities of the South and West.

[April,'60.

GREAT WESTERN WHOLESALE NURSERIES.

Fruit and Ornamental Trees in Large and Small Quantities for the Spring of 1861.

I would call the particular attention of parties starting new nurseries, and wishing to purchase Nursery Stock; also, dealers generally, (as many kinds of Ornamental Trees and Shrubs will be sold in large quantities at less than half their value), as my stock is the oldest, and combined with three large nurseries at Coldwater, Mich., which makes it the LARGEST AND MOST COMPLETE STOCK in the West.

Among which will be found:

50,000 three year old apple trees;
500,000 two year old apple trees;
1200,000 one year old apple trees;
10,000 two and three year old pear trees;
10,000 two year old cherries;
20,000 peach, one year from the bud;
30,000 Lawton blackberry;
20,000 raspberries;
30,000 currants;
10,000 Houghton gooseberries;
10,000 grape;
50,000 evergreens, assorted;

Besides a very large and full stock of Roses, Greenhouse and Bedding Out Plants, as well as nearly all kinds of Shade and Ornamental Trees and Shrubs, which will be sold at low figures. Give us a call and see. All orders by mail, or otherwise, will receive prompt attention. F. PRENTICE,

Great Western Nurseries, Toledo, Ohio.

Nov. 1, 1860.

Bryant & Stratton's
Chain of National
Mercantile Colleges

LOCATED AT ST. LOUIS, MO.

Corner Fourth, Vine and St. Charles sts. over Ubsdell, Pierson & Co.; also in NEW YORK, PHILADELPHIA, ALBANY, BUFFALO, CLEVELAND, DETROIT and CHICAGO. SCHOLARSHIPS of the ST. LOUIS COLLEGE, good throughout the entire chain of eight Colleges. BOARD OF REFERENCE.

D. A. January, Esq. Hon. O. D. Filley, Maj. Uriel Wright, Hon. Samuel Breckenridge, Hon. F. P. Blair, Prof. Richard Edwards, Prof. E. D. Sanborn, B. Gratz Brown, Esq. H. D. Bacon, Esq. Pres. E. C. Wines, Rev. Wm. G. Eliott, Robert A. Barnes, Esq. Henry Ames, Esq. Hon. J. R. Barret, Hon. Washington King, Prof. J. G. Hoyt, Ira Divoll, Esq. Stephen D. Barlow, Esq. S. H. Bailey, Esq. R. M. Funkhouser, Esq. Rev. T. M. Post, William Homes, Esq. Rev. Jas. H. Brookes, W. L. Ewing, Esq. Geo. R. Taylor, Esq. Jos. Baker, Esq. Stephen Hoyt, Esq. Jas. Duncan, Esq. Jas. H. Lightner, Esq. Adolphus Meier, Esq.

The St. Louis College, like those with which it is connected, will be organized and conducted on the Business Life and Counting Room plan, being fitted up and arranged with appropriate offices, counters, desks, etc. as in real business. The Student will be introduced to the practical workings and routine of business as conducted in Counting Rooms, Banks, Steamboat Offices, etc. while at the same time he will be thoroughly taught the principles involved.

The Collegiate Course embraces DOUBLE ENTRY BOOK-KEEPING, COMMERCIAL LAW, COMMERCIAL COMPUTATIONS, PENMANSHIP, BUSINESS CORRESPONDENCE, &c.

The Spencerian Writing Department will be conducted by Prof. H. C. SPENCER. The Departments of Commercial Computations and Languages by Prof. CONRAD MOSER.

Rooms open day and evening. Entrance on Vine st. For Catalogues, Circulars and information of any kind, call at the College, or address

BRYANT & STRATTON,

Mar.'60,1y.* St. Louis, Mo.

CATALOGUE OF BOOKS ON AGRICULTURE AND HORTICULTURE,

PUBLISHED BY C. M. SAXTON, BARKER & CO.

And kept for sale at the Office of the Valley Farmer, 97 Chesnut Street, up stairs, St. Louis, Mo.

American Fruit Book,	50
" Weeds and Useful Plants,	1 50
" Cattle Doctor,	1 00
" Farm Book,	1 00
" Rose Culture,	25
Bousingault's Rural Economy,	1 25
Cole's Veterinarian,	50
Catechism of Agricultural Chemistry,	25
Complete Farmer and Gardener,	1 25
Cotton Planter's Manual,	1 00
Culture of the Vine,	25
Chinese Sugar Cane,	25
Chemistry Made Easy,	25
Domestic Animals,	75
Domestic and Ornamental Poultry,	1 00
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Messrs. Wyman, Banker, Carpenter & Co.—Gents: I have used about one ton per week of your Cotton Seed Oil Meal at my dairy farm, near Glencoe, in feeding milch cows, and consider it one of the most valuable articles of food known for that purpose. The yield of milk is greatly increased by it, and the quality improved, while it leaves the cattle in good condition. I anticipate using double the quantity during the next winter. JAMES E. YEATMAN

St. Louis, Sept. 8th, 1860.

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Messrs. Wyman, Banker, Carpenter, & Co: I have for two seasons bought largely and used freely your Cotton Seed Oil Meal for stock. I have fed it to cattle, milch cows and hogs, with excellent results in all cases. I consider it a very healthy, nutritious and economical feed, and would not willingly dispense with it. G. W. GOODE.

St. Louis Co. Sept. 8th, 1860.

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St Louis, Sept. 7th, 1860.

I have used the Cotton Seed Oil Meal manufactured by Wyman, Banker, Carpenter & Co. for several seasons, with my milch cows, with GREAT ADVANTAGE TO THE QUALITY AND QUANTITY of the milk, and to the condition of the stock. In using this meal, I found the milk increased fully one-third in quantity, and the quality for butter making much improved.

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Messrs. Wyman, Banker, Carpenter & Co.—Gents: Please save me 5 tons of your Cotton Seed Oil Meal for my fall use. It gives me great pleasure to say that I esteem this feed which I have been using for more than two years, as the very best known to me for WORKING CATTLE AND MILCH COWS. It would greatly disappoint me not to get it. JOHN J. MURDOCK.

From GILES F. FILLEY.

I have been using for some time the Cotton Seed Oil Meal, made at the O'Fallon works, for my milch cows, with good and satisfactory results.

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From JONATHAN JONES, Esq., President Commercial College.

Messrs. Wyman, Banker, Carpenter & Co.—Gentlemen: Having been among the first in this country to use the Cotton Seed Oil Cake as an article of food for milch cows, I am fully prepared to certify as to its qualities, &c. Good blue grass excepted, I have never seen anything equal to it for producing milk, either as to quantity or quality—the cream being abundant and the butter firm—though somewhat inclined to be white. My mode of feeding it has been one part Cotton Seed Oil Cake and two parts bran, and from my experience in using it, permit me to say, that if good corn meal were thirty cents per bushel, and Cotton Seed Oil Cake forty dollars per ton, and bran twenty cents per bushel, I should continue to feed my ten cows just as stated above—that is to say, I consider it the BEST AND CHEAPEST WINTER FEED for milch cows known to me.

Respectfully yours,

JONATHAN JONES.

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For two years I have been in constant use of your Oil Meal for my Milch Cows and other stock, more particularly the former. In three weeks after I commenced the use of it, THE MILK OF MY COWS INCREASED FULLY ONE HUNDRED PER CENT., and greatly improved in quality. This was solely attributable to the Oil Meal. I consider the article not only invaluable, but to me indispensable. JOHN H. AVERY.

Cherry Hill Farm, St. Louis Co., Aug. 29, 1860.

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